

Benefits Choices 2008



(Almost) everything you need to know to make benefits changes during the upcoming open enrollment period, Oct. 20-Nov. 9. Stories and charts begin on **page 6**.

LDRD stars illuminate their work

Presentations show wide range of research activities

By Neal Singer

On a stage empty of décor in Bldg. 962 in Tech Area 4, six youthful-appearing LDRD (Laboratory Directed Research and Development) presenters captured the attention of a small audience of about 40 with the intensity of their descriptions of their projects.

The noise level rose afterward when a rotating flux of some 50 Sandians inspected 36 posters describing other LDRD efforts.

"It's about interacting, not just listening," said LDRD manager Hank Westrich (1011) approvingly of the freewheeling discussions. The location was chosen because of the large room available for poster presentations.

The oral and poster sessions were preceded by a fact-filled opening talk by Sandia Div. 1000 VP Rick Stulen, who explained the evolving basis for winning the coveted three-year funding, which the Labs has used to develop promising new technologies.

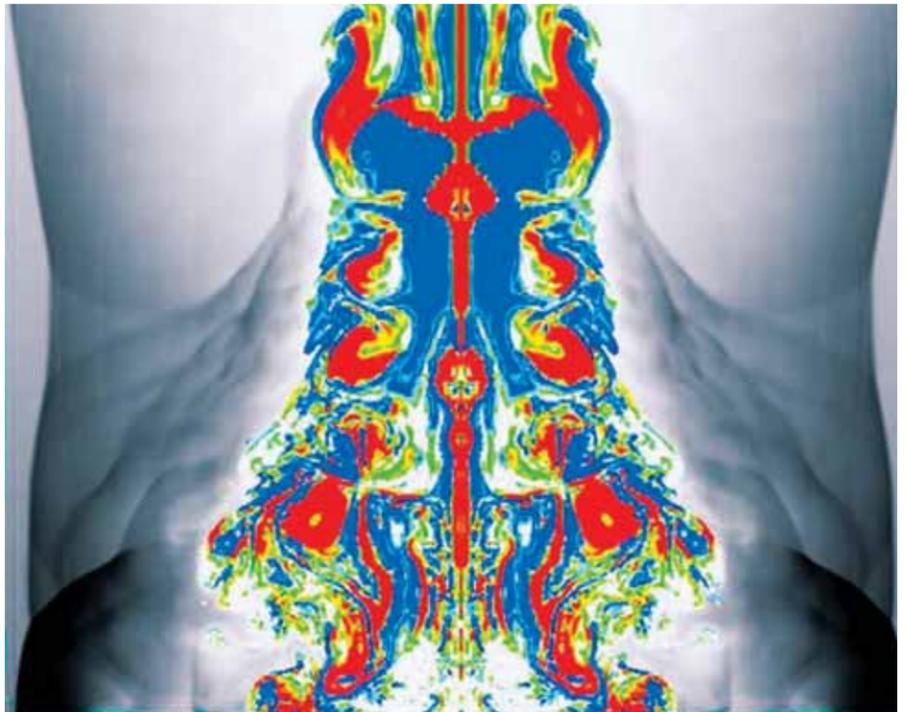
In official terminology, these start-up funds are the "seed corn" of the Labs, which "nurture its core, support its missions, and drive its future," said Rick.

The program's history and results are indeed unusual.

According to Rick's figures, early-stage LDRD grants have supported 60 percent of Sandia's R&D 100 award winners since 1992. (R&D 100 award winners are determined yearly by independent judges selected by *R&D Magazine* from projects submitted to the competition from around the world. The projects

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LDRD Awards for Excellence winners recognized. See page 5.



DURING HIS LDRD DAY PRESENTATION, researcher Mark Boslough discussed the effects of an asteroid collision with Earth. As depicted in this computer model image developed by him, large ring vortices enhance downward energy flows, intensifying their coupling with Earth's surface.

Convergence of issues is driving move toward transformation of nuclear weapons complex

Sandia management teams tackling challenges on a Labs-wide basis

By Bill Murphy, *Lab News* editor

Several developments, each of which by itself could have a significant impact over the next few years on the Labs, its mix of work, and its workforce, are converging virtually at the same time.

Labs Director Tom Hunter has assigned senior management-led teams to study the implications and impact of each of the issues and develop strategies and responses for dealing with them.

The issues will not be dealt with as separate challenges, but will be considered in a synergistic,

explained in some detail in a Sept. 14 *Lab News* article. The big challenge for this year's continuing resolution planning is that the Labs has been instructed to base budget assumptions on the lowest of the various budget proposals under consideration. What it means for Sandia is that the House budget proposal, which would reduce Sandia funding by more than \$200 million, would become the de facto operating budget under a continuing resolution. If this worst case con-

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Analysis

Labs-wide fashion, Tom has said.

The first two issues discussed below (the status of the continuing budget resolution situation and the status of plans to restructure the Labs' internal business model) could have near-term impact at Sandia, including impact on the size and composition of the workforce. The other issue — a request for information from NNSA about revamping the contracting structure across the entire nuclear weapons complex — while significant in the long term, may not have immediate impact at Sandia or elsewhere. Here are the issues involved:

1. The possibility that the Labs may be required for some time to operate under a so-called continuing budget resolution set at a very conservative level.

A continuing resolution occurs when, by the beginning of the fiscal year on Oct. 1, Congress has not yet passed a final budget for a particular operation (such as the DOE nuclear weapons budget). This issue has been widely discussed around the Labs in recent weeks; it was the subject of a memo from Tom Hunter dated Sept. 7 and was

Celebrate 50 years of giving



Sandia's annual Employee Caring Program campaign this year is Oct. 8 to Oct. 26. Last year, Labs employees and retirees pledged more than \$3 million to United Way and other community organizations. The schedule for the ECP/United Way Campaign Kickoff Book Fair is on page 12.

Also inside . . .



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NICHOLAS MASCARENHAS, principal investigator for the neutron scatter camera, prepares the detector for a test. The neutron scatter camera can detect radiation at significant standoff distances and through shielding, and can pinpoint the source of radiation. (Photo by Randy Wong)

Neutron scatter camera provides a new way to look at radiation

By Patti Koning

Since 9/11, radiation detection has taken on a new immediacy as a means of preventing a nuclear weapon attack within the US. Gamma-ray and neutron detectors are being deployed at border crossings and ports, with the goal of enabling interdiction of a nuclear weapon or material before it enters the country.

A neutron scatter camera being developed at Sandia/California offers a new way to detect radiation. The instrument is able to count neutrons from a source of special nuclear material (SNM) and localize it — meaning it doesn't tell you there is radiation, but where it is emanating from and, under some circumstances, how much there is.

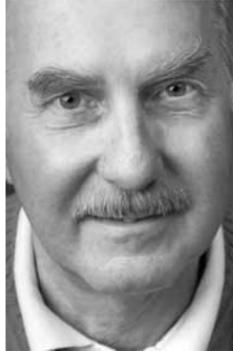
(Continued on page 3)

What's what

Former Labs PR chief Jim Mitchell, who probably reads *The Wall Street Journal* more closely than its own editors, emailed last week a piece from the *WSJ* noting that the hyphen is fading from use, "a victim of increasingly high-speed emailing that leaves little time for additional keystrokes."

It referred to a BBC report that in the *Shorter Oxford English Dictionary's* most recent edition, "about 16,000 compound words that once took hyphens have lost them, including fig leaf, leapfrog, pot belly and test tube." The dictionary's editor said the changes reflect real-world usage.

To all other than those who write, edit, or simply appreciate the nuance of language, this flurry of interest in the lowly hyphen probably seems arcane. Chris Robinson, who teaches writing at the University of Edinburgh, told the BBC reporter that any attempt to stress the importance of the hyphen certainly would be wasted on her undergraduate students, "who often don't know the difference between a noun and a verb."



HOWARD KERCHEVAL

Usually it's "Albuquerque" or "Sandia" that gets mangled in a news story or letter written by someone at a distance from both. But last week, it was another of those amusing miscues about the name of the state.

John Fleck, whose *Albuquerque Journal* beat includes Sandia and Los Alamos, noted in his blog this from a story in the Sept. 18 issue of *The Times of India*: "Researchers are all geared up to make the fast lanes safe. The project is starting at Sandia National Laboratories outside Albuquerque, New Minnesota, with funding by the Pentagon and a major auto maker."

A couple of Sandians also got a good email laugh out of it.

Also from the emailbag, retirees Marvin Moss and Jim Wadell pointed out — along with some still-working Sandians — that my "music to soothe the savage beast" comment in the Sept. 14 issue of *Lab News* was merely *almost* right. It should have read, they pointed out, "Music hath charms to soothe a savage breast."

They were right. That's the line from Act I, Scene 1, of William Congreve's 1697 play *The Mourning Bride*.

Interestingly, though, if you google "to soothe the savage beast," you get several hits right up front. The quote has been misquoted so much, it seems, that the misquote has become a recognizable quote itself.

So, it was wrong, but right, and right but wrong. You know . . . like the stuff you hear from political candidates.

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

Strategic Relations Center restructured

By Chris Burroughs

Effective Sept. 21, Strategic Relations Center 10100 was restructured to be more responsive to a changing Labs mission portfolio and evolving industry needs.

Licensing and Intellectual Property Management, Market Research/Industry Strategy, Small Business Development, and the Sandia Science and Technology Park will report to Senior Manager Bob Blewer (10110). Bob will report to Div. 1000 VP Rick Stulen under the Science Technology and Engineering Strategic Management Unit (SMU).

Work for Others/Cooperative Research and Development Agreements will report to Senior Manager Gary Zura (9730). He reports to Tom Blejwas (9100), director of the Integrated Enabling Services (IES) Support and Lab Management System Center.

The partnerships development groups that have been supporting the Energy, Resources and Nonproliferation (ERN) and Defense Systems and Assessments (DSA) SMUs will report directly to those organizations.

The final change is that current Strategic Relationships Center Director David Goldheim will serve in a new role as Director of Lockheed Martin Corporate Relations and will report directly to Al Romig, Senior VP and Deputy Labs Director.

"With Lab missions changing, we felt it was time to restructure the organization to better meet the needs of the SMUs and industry to the benefit of both," Al says.

DOE funding for tech transfer programs peaked at \$100 million in the early 1990s but the program was later discontinued. The focus has now shifted to agreements with industry that focus on building mission-oriented relationships.

Stronglinks Conference set for Oct. 15-16

Integrated Surety Mechanisms Dept. 2613 is sponsoring a Stronglinks Conference Oct. 15-16 in Bldg. 898, Rm. 1423. The two-day conference is intended to give a broad overview to employees in DOE's nuclear weapons complex of the production of stockpile stronglinks and advanced development projects for stronglinks.

The Oct. 15 session is scheduled to run from 10 a.m. to 5:15 p.m. The Oct. 16 session runs from 7:45 a.m. to 5:30 p.m.

For technical information call Bill Greenwood at 844-2847. For more information about the conference, call Wendy Falls at 284-1534. To RSVP, call Wendy at 284-1534 or contact her via email at wfalls@sandia.gov.

Recent Patents

Note: Patents listed here include the names of active Sandians only; former Sandians and non-Sandia inventors are not included. Following the listing for each patent is a patent number, which is searchable at the US Patent and Trademark Office website (www.uspto.gov).

Blake Simmons (8755), Joanne Volponi (8321), and David Ingersoll (2546): *Enzymatic Cascade Bioreactor* (Patent No. 7,264, 962)
Edward Witzke (6432), Perry Robertson (1711), and Lyndon Pierson (5616): *Localized Radio Frequency Communication Using Asynchronous Transfer Mode Protocol* (7,257,093)

Sympathy

To Chris Tolendino (4112) on the loss of her mother, Sandia retiree Virginia Chapman, on Sept. 21, and Larry Tolendino (9334) on the loss of his mother-in-law. Virginia is also survived by two other children, son Tom Chapman and daughter Kari Wier.

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Take Note

Retiring and not seen in *Lab News* pictures: Janette Dirickson (8000), 17 years.

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Rad detection

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The results so far are encouraging, says principal investigator Nick Mascarenhas (8132). The neutron scatter camera potentially could detect SNM in quantities of interest in national and homeland security and from distances competitive with or beyond other capabilities. Nick says the goal is to reach much greater standoff detection ability.

Distance is a significant benchmark because it also means the neutron scatter camera can detect through heavy shielding, a concern at any border crossing or point of entry.

"This instrument can pinpoint a hot spot in another room through walls, something not typically possible with gamma-ray detectors," he says. "It's beating the older technologies, performance-wise, but we want to push the limits of what this instrument can do — to increase sensitivity and detection distance."

Jim Lund, manager of Rad/Nuc Detection Systems Dept. 8132, thinks the neutron scatter camera might be the best answer to the problem of seeking out smuggled SNM.

"It's more penetrating and can detect unambiguously at a greater distance and through more shielding," he says.

The project is supported by NNSA's Office of Nonproliferation R&D (NA-22). After successful initial development, the technology is being transitioned to both the Defense Threat Reduction Agency (DTRA) and Domestic Nuclear Detection Office (DNDO) to support specific applications.

DNDO impressed by device

Recently, representatives from DNDO sat in on a presentation by Nick to NNSA. They were so impressed that they asked him how quickly he could have it ready to ship to Hawaii as part of George Lasche's (6418) in-transit radiation characterization project (*Lab News*, Aug. 17, 2007).

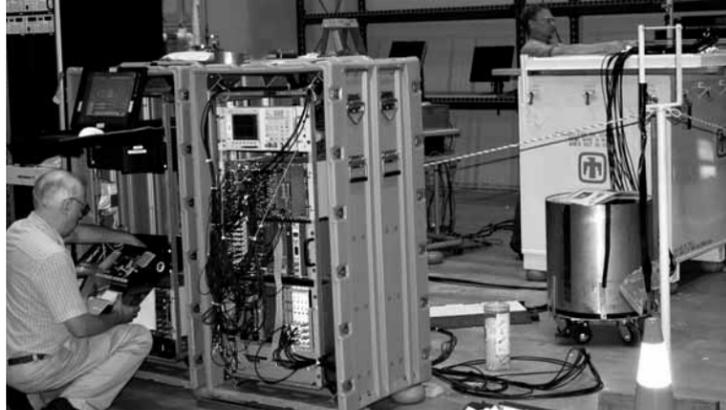
The neutron scatter camera will make three round-trips to Hawaii — the first departed from the Port of Oakland in early September. George says the camera has the potential to reduce false alarm rates — a critical issue for in-transit radiation detection.

"Our other instruments have told us a lot about the nature of nuclear radiation at sea, but not where it is coming from. The neutron scatter camera can tell us where the radiation is coming from and the size of the object. This information is

very helpful in deciding if we have a serious threat on our hands and can lead to fewer false alarms and a better chance of not missing the real thing," he says.

DTRA is funding a separate project to use the neutron scatter camera to measure and characterize background neutrons at Sandia/California, Sandia/New Mexico, and in Alameda, Calif.

"There are neutrons all over the place from



STAN MROWKA (left) and Kevin Krenz prepare the neutron scatter camera for a boat trip to Hawaii as part of the in-transit radiation characterization project. Kevin is the lead for organizing logistics for the DNDO neutron scatter camera shipping project. (Photo by Nick Mascarenhas)

cosmic radiation, even when you are sitting indoors," says Nick. "Our instrument can measure the energies, rates, and angular variation. This is important in understanding standard operating conditions. You can't really detect anomalies until you understand what's normal. This data can also be used to improve instruments to better suppress the standard operating conditions."

The neutron scatter camera has an advantage over traditional neutron detection because it can differentiate low-energy neutrons from high-energy neutrons.

Device only sees high-energy neutrons

"It doesn't have to worry about the low-energy nuisance neutrons that are always all around us because it can only see high-energy neutrons, and the high-energy neutrons carry almost all of the imaging information," says George.

Another advantage is shielding. While gamma rays can be blocked from detectors quite easily, neutrons are much more difficult to conceal. In a lab test, the camera easily detected and imaged a source placed across the hallway, through several walls and cabinets.

Jim notes that the neutron scatter camera is limited in terms of size and time, compared with gamma-ray detectors.

"Ideally, we'd use both systems," he says. "The

neutron scatter camera isn't practical as a hand-held detector with immediate feedback."

Nick and his team — Kevin Krenz, Peter Marleau, Stan Mrowka (all 8132), and Jim Brennan (8321) — took a slow, careful approach to developing the neutron scatter camera, which has paid off. They started with just two elements and worked to understand everything about how the instrument worked on a simpler scale before moving on. The result is a scalable instrument.

The camera consists of elements containing proton-rich liquid scintillators in two planes. As neutrons travel through the scintillator, they bounce off protons like billiard balls. This is where "scatter" comes into play — with interactions in each plane of detector elements, the instrument can determine the direction of the radioactive source from which the neutron came.

The neutron eventually flies off, but not before energizing the protons with which it has interacted. The proton will lose its energy in the scintillator. As that energy is lost, it is converted into light. Photomultiplier tubes coupled to the scintillator detect the light.

Computers record data from the neutron scatter camera, and using kinematics, determine the energy of the incoming neutron and its direction. Pulse shape discrimination is employed to distinguish between neutrons and gamma rays.

The biggest obstacle to the camera becoming widely adopted is the liquid scintillator, which is flammable, hazardous, and requires special handling. According to Nick, materials exist that could be used as a solid scintillator, but they need to be mass-produced and made readily available in the US for this purpose. Solid scintillator material, he says, is not in the scope of the current project but is a logical next step.

The current version of the neutron scatter camera has four elements on one side and seven on the other. To improve sensitivity and direction, all that is required is to add more elements.

Nick describes scaling up as an engineering challenge rather than a scientific limit. Bigger means more places where things can break down, but this isn't a physics issue, he says.

"We are not concerned with size at this point — our mission is to understand everything about the performance of this instrument and make it the best it can be," he says. "Making it portable or compact might be the next steps, but that's something I'm confident that Sandia, as an engineering laboratory, can solve."

Sandia California News

Ken Ball's 'street photography' featured in Livermore Art Walk

By Patti Koning

Most people at the Sandia/California site know Ken Ball (8528) as a superb technical illustrator, capable of any job you throw at him — from detailed specs to posters to hand-drawn figures. To see another side of Ken, visit Art Walk 2007 on Oct. 13 in downtown Livermore.

Sponsored by the Tri Valley Artists Guild, Art Walk features the work of more than 100 artists exhibited in and around local businesses in downtown Livermore. Ken's work will be displayed in the offices of *The Independent*, at the corner of First St. and N. Livermore Ave.

He'll be exhibiting what he calls street photography. "I like to capture the human element, which often means photographs without people in them, but showing the impact of people," he explains.

His street photography is always spontaneous, never staged. Ken brings his camera to San Francisco or anywhere he happens to be and looks for something that catches his eye.

"Perhaps because I am a graphic designer by trade, I am attracted to images that have a strong sense of design. The combination of shapes, light, color, and cropping in my photographs tends to be graphic in nature," he says. "Most of my images relate to people and their environment.

Whether I am shooting portraits, street scenes, or objects, it is the human presence that I find interesting. That presence may be obvious or unseen, like the graffiti left on a wall, or an empty street scene. These are things that most people pass by and never think twice about, but captured in a photo-

graph they make for very interesting images."

Ken has been creating art for as long as he can remember. As a child he was always drawing in school, no matter what anyone else was doing. In addition to photography, he also loves to draw and paint.

Art has been the core of his professional and personal life. He started his career as a technical illustrator more than 30 years ago, back when everything was drawn by hand.

"Anytime I get a project at Sandia that involves pencil on paper, it's a real treat," he says. Such jobs have included storyboards and cartoons (yes, cartoons) illustrating safety or procedures.

Ken's wife Victoria, who works as a graphic artist at Lawrence Livermore National Lab, is also a photographer and artist. They have been busy for the past few years working on a book profiling the photography students of Ansel Adams and Minor White just after World War II.

Both Adams and White were involved in founding the photography department at the California School of Fine Arts (now the San Francisco Art Institute) and taught at the school, along with other notable photographers such as Dorothea Lange, Edward Weston, Imogen Cunningham, and others.

Victoria's father, Don Whyte, attended the California School of Fine Arts on the GI Bill, as did most of the other students. The book features the work of more than 25 photographers, showcasing their large format black-and-white photographs taken between 1945 and 1955. Ken and Victoria expect the book to come out in 2008.



"JDOG" an example of Ken Ball's black-and-white "street photography" was taken in San Francisco. (Photo by Ken Ball)

Change

(Continued from page 1)

tinuing resolution were to remain in place for some time, the Labs would clearly be required to reduce spending, including the possibility of reducing workforce by some several hundred people. NNSA Administrator Thomas D'Agostino has directed management around the complex to begin planning — as a contingency measure — for potential workforce reductions that might be required under the very conservative continuing resolution. Such planning is being carried out complex-wide in processes defined by federal law, collective bargaining agreements, and contracts.

As the *Lab News* went to press this week, it appeared possible that congressional conferees were close to agreeing on a continuing resolution based on FY07 expenditures in the weapons program rather than on the worst-case funding level. However, NNSA administrator D'Agostino has said that even if impacts of a worst-case continuing resolution are avoided, there could still be impacts in FY08 at some NNSA sites due to programmatic and mission-related changes.

And a continuing resolution, regardless of whether it is "worst-case," is still a temporary legislative fix. The reality is that a final FY08 budget will still have to be hammered out in a House/Senate conference committee, and that budget could fall anywhere between the worst-case and best-case (i.e., House and Senate) alternatives.

2. The restructuring of the Integrated Enabling Services (IES) Strategic Management Unit and Sandia's internal business model.

The Labs has announced an intent to keep indirect costs essentially flat over the next few years, with the aim of offsetting as much as possible certain cost growth areas and minimizing the impact on costs to our customers. Stated another way, the intent is that more of the dollars customers invest at Sandia are applied directly to technical work and less are applied to overhead. The challenge in this area is that certain unavoidable indirect costs are going to increase substantially.

Health care costs, for example, continue to rise, and while the Labs can (and has) taken steps to mitigate those increases, it is not realistically possible to hold that growth to zero. The health care cost trend is upward and will remain so.

Also, by the end of the decade, the Labs will almost certainly be required to make substantial payments into the Sandia pension fund, something it hasn't had to do for about 30 years. There are also other unavoidable costs that must be addressed such as electricity costs that will double in the near future. If the Labs did nothing — that is, stayed with the status quo — indirect costs could increase by anywhere from \$100 million to \$200 million per year by 2010. In order to keep indirect costs flat — the Labs' stated intent — reductions will have to be made in those parts of the indirect costs over which the Labs does have some control. Most of those reductions will be led by the IES SMU.

A team is currently looking at IES, with the intent of reshaping the Labs' internal business model for delivering indirect services. Under that model, Sandia would rely on more standardized services, more emphasis on efficiency and frugality, greater use of business process optimization tools, and restructuring and consolidation to gain new efficiencies. In fact, some services currently provided by IES would be eliminated or reduced in scope.

A team is currently looking at IES, with the intent of reshaping the Labs' internal business model for delivering indirect services.

Happy birthday, US Air Force!



(Photo by Michael Padilla)

On Sept. 14, New Mexico's three US Air Force bases joined in the nationwide observance of "Heritage to Horizons," the 60th anniversary celebration of the US Air Force. Festivities, sponsored by Kirtland, Holloman, and Cannon Air Force bases, were held at Sandia Resort in Albuquerque. The festivities included flyovers by some of the nation's most advanced aircraft and also featured displays by many organizations, including Sandia. In the photo above, Brian Kast (6471), left, on Philip Heermann (6470) display Sandia's robotic capabilities. The photo at left shows a Kirtland Air Force Base pararescue member coming in for a precision landing.

(Photo by Randy Montoya)

3. An NNSA RFI (Request for Information) on revisions to the current contracting structure for the nuclear weapons complex.

NNSA on Sept. 10 issued a formal Request for Information (RFI) about ways to (in the words of an NNSA news release issued along with the RFI) "improve its current contracting structure for the nuclear weapons complex, particularly at its production plants." Each of NNSA's eight sites (including its three national laboratories, the Nevada Test Site, the Pantex Plant, the Kansas City Plant, Y-12, and the Savannah River Site tritium operations) is handled under a separate management and operation contract.

The news release accompanying the RFI stated: "NNSA is evaluating alternatives to this current contracting model and is seeking to identify a contract arrangement — especially at its Kansas City Plant, Y-12 National Security Complex, and Pantex Plant, all of whose contracts expire in 2010 — that will help to improve performance, reduce cost and stimulate interest and competition within the contracting community."

NNSA specifically invited input on the RFI from the contracting community and other interested parties. Responses to the RFI are due Oct. 1. As an interested party, a Sandia Corporation/Lockheed Martin team went to work immediately to develop a response to the RFI.

According to the terms of the RFI, responses could include, but are not limited to, consolidation of management and operating contracts, use of other types of contracts on a single or multiple facility basis, use of function-based contracts (e.g., construction, information technology) applicable to two or more sites, and transfer of work scope from one or more current contracts to other existing or new contracts.

According to the Sandia Corp. RFI team lead Dori Ellis (12100), as the group weighs its response to NNSA, it is taking a broad view and considering options that best serve the nation.

The ultimate decision on how to use the information garnered through the RFI process is in NNSA's hands, but the issuance of the RFI suggests that NNSA is beginning to move forward with its much discussed transformation process. And implicit in the RFI is the sense that NNSA is looking for innovative ideas. Thus, as the complex is transformed, changes — even bold

changes — are likely at Sandia and other NNSA facilities.

It's important to recognize, too, that Sandia has not been caught flat-footed by the NNSA RFI. Joan Woodard and the leadership team in the Nuclear Weapons SMU have been working for more than two years on issues around transformation of the nuclear weapons complex, how it should look in the future, and where Sandia and its assets fit into that picture. Much of the hard thinking that has been done on that subject is likely to find its way — in one form or another — into the Sandia Corp./Lockheed Martin RFI response.

The context of change

The issues outlined above are the most visible, above-the-horizon developments that Sandia management — along with their counterparts across the nuclear weapons complex — are dealing with at the present time. Below the horizon, however, is the fact that these developments are occurring in a dynamic public policy environment and an increasingly complex and multipolar international order.

During the Cold War, the nation enjoyed broad, bipartisan consensus: America would invest whatever it took to counter strategic investment in the Soviet Union. Since the early 1990s, the nation has been moving toward a new understanding of strategic deterrence and the role that nuclear weapons should play. There is not yet an absolute bipartisan consensus, but there is growing agreement that a nuclear deterrent is essential for the nation, that the stockpile must be smaller, and the Cold War-era weapons complex needs to be fundamentally transformed. There seems to be a growing consensus that the national laboratories need to diversify their missions even more than they have over the past decade, and even a sense that some facilities that are currently "owned" by DOE/NNSA should perhaps become multiagency facilities with only peripheral roles in nuclear weapons work.

For the past two years, Sandia's senior management has been talking about the need to transform, the desirability of transformation, even the inevitability of it. With the developments outlined above, and given the context in which those developments are occurring, it is clear that transformation — change — is upon us.

LDRD Day

(Continued from page 1)

must show enough development, in addition to original research, to make a difference in the world's technologies.)

In addition, LDRD funds have supported five of Sandia's 10 most highly cited publications from 2002-2006. (The number of citations a research paper receives in the papers of later researchers is thought to be a key indicator of its importance.)

"The impact of the [nearly \$150 million] LDRD program far exceeds the 8 percent of Sandia's budget it represents," Rick said.

A deliberately slimmed-down reviewing process now allows PIs "to devote more time to research rather than paperwork," he said. In addition, the formerly opaque process has been changed to provide "insightful comments back to PIs, which they seem to appreciate," he said.

Perhaps surprisingly, Rick's tables showed that the average start-up project size had increased into the \$400,000 range, with a decline in projects in the less-than-\$100,000 range. "Don't hesitate to propose \$500,000 to \$700,000 programs that will make an impact, even in activities that may not see the light of day for five to 10 years," he said.

"There's a myth at the Labs that LDRDs [projects] are only occupied by folks in mid and late career who know how to work the system," said Rick. Projecting a graph that showed a breakdown of participants by age, he said, "As you can see, almost 50 percent of funding recipients have been here less than five years. Twenty percent have been here five to ten years."

By accident or design, the speakers seemed to embody the youthful appearance of the figures presented by Rick.

Dahv Kliner (8368) presented ongoing work in the Fiber Laser Grand Challenge, which is developing a new generation of compact, rugged, high-power lasers based on fiber optics. The group has achieved a peak power of more than 1 MW from a single fiber, a factor of 100 beyond the conventional "single-mode limit." This performance was achieved using the patented coiling technique, first published by Sandia researchers in 2000, that has become the de facto worldwide standard for power scaling of fiber sources. The method has been licensed for industrial applications and was a recipient of this year's R&D 100 Award.

Dahv pointed out that the peak in-fiber irradiance is beyond the damage threshold for fused silica reported in some studies. Further Grand Challenge research has shown that these earlier reports were incorrect, and the fundamentally new understanding of optical damage is "rewriting the textbooks," with significant implications for high-power laser optics in general. The high-profile program is now entering its fourth and final year of LDRD support.

Shanalyn Kemme (1725) discussed her efforts to manage a body's thermal emission through use of a thin, textured coating. The coating enables an effect called plasmon/photon coupling. Plasmons are waves of electrons that move parallel to the surface of an object. Through optimum choice of coating material and surface texture parameters (such as grating period and depth), both the angular pattern and wavebands of thermal emission can be shaped.

The method works because a sub-wavelength grating provides phased coupling between the incoherent thermal mode and coherently radiated photons. Key to this mechanism is the sub-wavelength diffractive optic. Its parameters determine the efficiency of the coupling, angles of radiation, and wavelengths emitted. Small pieces of this cou-

2007 LDRD Award for Excellence winners

- **Nanolithography Directed Materials Growth and Self-Assembly**

Principal investigator: Julia Hsu

For pioneering work on controlled growth and assembly of oxide nanostructures on surfaces and for furthering the understanding of heteroepitaxial growth of dissimilar materials.

- **Microwave to Millimeter Wave Electrodynamic Response and RF Applications of Semiconductor Quantum Nanostructures**

Principal investigator: Mark Lee

For opening a new frontier in high-frequency nanotechnology by exploiting the quantum mechanical properties of semiconductor nanostructures for microwave and millimeter-wave applications.

- **Controlled Fabrication of Nanowire Sensors**

Principal investigator: Francois Leonard

For developing a fundamental understanding of nanowire-based sensors: synthesis, assembly, characteri-

zation, and modeling.

- **Just in Time Jamming of Enemy Detonation Signals**

Principal investigator: Larry Bacon

For developing a responsive RF jammer that selectively jams in narrow frequency range.

- **Nanoporous Films for Epitaxial Growth of Single Crystal Semiconductor Materials**

Principal investigator: Hongyou Fan

For developing photolithographically defined and self-assembled carbon nanostructures to provide first-of-a-kind hierarchical growth templates for defect reduction in wide bandgap semiconductor heteroepitaxy.

- **Bead-based Multiplexed, Orthogonal, BW/ID BioWarfare/Infectious Disease Detection Microsystem and Technologies**

Principal investigator: Paul Galambos

For leading a multidisciplinary team in a high-risk, innovative approach to the simultaneous detection of chemical/biological agents and radionuclides in raw samples.

pling diffractive optic will be added to a binder and painted conformally onto an object, she said, so that it should appear almost invisible to heat-detecting instruments.

Hongyou Fan (1815) described his group's success in reducing defects in the epitaxial growth of single-crystal semiconductor materials. The work contributed to winning an R&D 100 award this year, and was also selected for a 2007 LDRD Award for Excellence. Hongyou and his team developed photolithographically defined and self-

for tens of seconds.

Explosions may occur above the Earth, he said, when the exponentially increasing air resistance causes an exponentially increasing broadening of the incoming asteroid.

While Mark's work did not involve creation of a new device, Sandia senior LDRD manager Wendy Cieslak (1010) pointed out that any possible assault on Earth that did not have an upper limit on the damage it could do — as asteroids do not — was clearly a province for exploration by a national security laboratory.

Tammy Kolda (8962) showed computer codes could use mathematical matrices to combine disparate data sources, such as email, telephone, open source, and cell phone data, into a single report that could be mined for particular information. The novel methods for mathematically analyzing graphs include automatically grouping and labeling hyperlinked web pages according to their importance and topic. The approach relies on tensor decomposition methods, which is a new approach to graph and data analysis.

Two new software packages were developed as part of this work: The Tensor Toolbox for Matlab for computations on tensors and TaMALE for graph visualization. The research breaks new ground in cyber security applications.

David Gill (2455) discussed his group's creation of optimized, light-weight, high-strength structures for aerospace applications. His group used a new code for structural optimization based on Sandia's extended finite-element method (X-FEM) code, and then partnered with University of Rhode Island to develop generalized 3-D structural optimizations.

In the past, he told the *Lab News*, such computer renditions weren't helpful because the topologically optimized structures couldn't be fabricated by ordinary manufacturing processes. These start with a block of material from which sections are cut or etched away. But using Sandia's LENS[®] (Laser-Engineered Net Shaping[™]), a trademark additive manufacturing process which creates objects out of laser-heated powders, the structures were created. They combine high strength with the lowest possible weight. The project is called, mysteriously enough, "titanium-cholla" because titanium is one of the chief materials for aerospace applications and the structure of the dried cholla cactus is like an optimized torsional beam, which could be used to lighten an automobile driveshaft while maintaining strength comparable to current designs.

Winners of the 2007 LDRD Award for Excellence are listed in the box above.



LDRD AWARDS FOR EXCELLENCE winners, seen here with Div. 1000 VP Rick Stulen (center) are, from left, Paul Galambos, Larry Bacon, Julia Hsu, Rick Stulen, Francois Leonard, Mark Lee, and Hongyou Fan. The recipients were honored during LDRD Day, an annual showcase of some of the Labs' top R&D efforts. (Photo by Bill Doty)

assembled carbon nanostructures to provide the first hierarchical growth templates for defect reduction in wide bandgap semiconductor heteroepitaxy. The work, which he said may impact all forms of heteroepitaxy, is tightly aligned with Sandia's solid-state lighting initiative and the next generation of RF electronics.

"Defect-reduction strategies for group III nitride semiconductors are of immense technological importance," he said. Use of combined lithographically and self-assembled templates offers freedom from conventional top-down etched-template approaches, he later explained, and hence new opportunities. More importantly, the porous carbon materials exhibit what he feels to be ideal structure and framework chemistry for water purification, nuclear waste treatment, sensors, catalysis matrices, energy conversion and storage.

Winning two awards, joining Sandia as a PMTS, and the Sept. 1 birth of an 8.5-pound daughter named Cindy have made this a pretty good year for Hongyou.

Mark Boslough's (1433) gut-wrenching simulations of asteroids hitting Earth improved upon science fiction renditions of the same phenomenon by offering new information about the effects of such impacts. Formerly thought to be chiefly a downward thrust that dug out significant craters in earth, Mark's use of Sandia's CTH codes on the Red Storm supercomputer has demonstrated that small cratering events can actually involve large airbursts with incandescent fireballs in contact with a surface area of hundreds of square kilometers

Benefits Choices 2008

Open Enrollment is Oct. 20-Nov. 9

It's time to make your benefits decisions for the coming calendar year. Benefits Choices 2008 Open Enrollment will be held Oct. 20 through Nov. 9. Benefit elections will not be accepted after midnight (MST) Nov. 9. All benefit elections take effect Jan. 1, 2008.

This article provides you with important Open Enrollment (OE) information for employees and retirees and the 2008 health plan monthly premium-share amounts. By reading this article along with other Open Enrollment communication materials (employee newsletter, Open Enrollment web site, retiree booklet), and understanding the benefit options available to you, you should be able to evaluate and select the plan options that best meet your needs.

For Benefits Choices 2008 web-based Open Enrollment information and resources, visit HR Self-Service at <http://oe.sandia.gov>.

What's new for employees in 2008

Health, Benefits, and Employee Services (HBE) wants to

point out two items that are important for you to take note of during this Open Enrollment. **First**, effective Jan. 1, 2008, for employees enrolled in one of the UnitedHealthcare (UHC) medical plans, the administrator for your prescription drug benefit is changing from PharmaCare to Catalyst Rx. For detailed information, check out the article "Important Rx Drug Benefit Information for UnitedHealthcare Members" on page 10

Second, a change to the vacation borrowing rule for nonrepresented employees, effective Jan. 1, 2008, will limit the number of "borrowed" hours to 40. "Borrowing Vacation" is vacation hours taken in excess of accruals plus remaining eligibility, putting the employee in a negative balance situation. Years of service are taken into account when determining if the employee is in a borrowing situation. Employees on roll for 10-plus years are in a borrowing situation when their vacation balance and fiscal year projection is negative. Employees on roll less than 10 years are

More benefits information

- Retiree information (starts on) Page 7
- Rx drug benefit information for UnitedHealthcare members Page 10
- Dental plan information Page 10
- Benefits fairs/presentations Page 10

in a borrowing situation when their vacation balance and any earned but not yet posted vacation is negative. In either case, when the balance is negative, the employee is in a borrowing situation and limited to 40 hours.

Most employees in a negative vacation balance are negative by less than 40 hours. But for those who find themselves needing more time off, Sandia offers other options such as excused unpaid absences, Vacation Donation (for qualifying emergencies), and **Vacation Buy Plan** — an Open Enrollment option.

Retiree information begins on page 7

Steps to take during Open Enrollment . . .

- 1) Review your current benefits under "Benefits Summary" on the HR Self-Service internal home page
- 2) Review the Open Enrollment newsletter and view the Open Enrollment information on the web (<http://oe.sandia.gov>) at work or at home, and evaluate how you want to coordinate benefits with your spouse's benefits (received through his/her employer). Employees will find on the web a wealth of information and tools to assist with benefit selections available this coming year.
- 3) Attend a benefits fair to speak with the vendors and/or Sandia staff. (See page 10 for benefits fair schedules.)
- 4) Determine whether you need to use the web-based Open Enrollment application according to the table at right.

Helpful tip: Remember to print the "Enrollment Summary Page" as a record of your final selections.

Plan ahead — some questions to ask:

- Do I need to add or drop any dependents? Detailed information about eligibility is available on the OE website. Remember, changes made during Open Enrollment are effective Jan. 1, 2008.
- (If married to another Sandian) — Am I satisfied with the current coverage arrangement? Remember that both Sandians must make these changes through the web-based Open Enrollment system. **Note:** If an active employee is covered as a dependent of a Sandia retiree, the employee will be enrolled in the applicable retiree plan.
- Do I want to open up a Day Care Reimbursement Spending Account (RSA) for my child's day care next year? Review the Payflex Tax Wizard (www.mypayflex.com) or RSA Summary Plan Description worksheet to determine whether an account or the tax credit is best for you. Remember that these accounts require an election each year.
- Do I expect to have health plan expenses (medical, dental, and vision) that will exceed \$100 during the next calendar year? Does my child need orthodontic treatment next year? Am I getting LASIK surgery? If so, should I open up a Health Care Reimbursement Spending Account? Remember that these accounts require an election each year.
- Am I satisfied with my medical plan? Is my physician still in the network? If you are thinking about changing medical plans, you should visit the vendor's website to review the list of network providers.

For many people, cost is one of the key factors in choosing a medical plan. The Medical Plan Estimator is specifically designed to help you estimate that cost, looking at both:

- What you are likely to pay for the services and supplies you

need during the year; and

- The amount that comes out of your paycheck when you enroll in the Sandia Medical Plan.

You can find the Medical Plan Estimator online at <http://oe.sandia.gov>.

- Am I satisfied with my current dental plan? Do I have too much coverage or not enough? Remember that current Dental Deluxe Plan (DDP) participants will automatically be reenrolled as participants in DDP for 2008 unless the participants change their dental coverage to the Dental Expense Plan (DEP) through the HR Self-Service Web Open Enrollment System during the Open Enrollment period.

- Do I have enough Voluntary Group Accident insurance, or do I have too much?

- Am I interested in purchasing vacation under the Vacation Buy Plan? Remember that this Plan requires an election each year.

- Am I retiring next year, and if so, how does this affect my choices? If you are retiring next year, you might want to visit the Open Enrollment website for retirees at <http://oe.sandia.gov> to become familiar with plan options and premium-sharing provisions for retirees.

HR Self-Service — web enrollment continues for Open Enrollment 2008

Employees can locate the web enrollment tool through HR Self-Service or through the OE Web Teaser on the Sandia home page.

Do you need to use the Web-Based Open Enrollment Application? Use this chart to decide . . .

	TAKE ACTION	NO ACTION
Medical Coverage	<ul style="list-style-type: none"> • To enroll if not currently enrolled • To change your current medical plan • To add or disenroll a dependent • To waive coverage 	<ul style="list-style-type: none"> • No change in your current medical coverage
Dental Coverage	<ul style="list-style-type: none"> • To enroll if not currently enrolled • To change your current dental plan • To add or disenroll a dependent • To waive coverage 	<ul style="list-style-type: none"> • No change in your current dental coverage
Vision Coverage	<ul style="list-style-type: none"> • To enroll if not currently enrolled • To add or disenroll a dependent • To waive coverage 	<ul style="list-style-type: none"> • No change in your current vision coverage
Reimbursement Spending Accounts (RSA)	<ul style="list-style-type: none"> • To enroll in a Health Care RSA for 2008 (even if you participated in 2007) • To enroll in a Day Care RSA for 2008 (even if you participated in 2007) 	<ul style="list-style-type: none"> • To not be enrolled for 2008
Vacation Buy Plan	<ul style="list-style-type: none"> • To enroll for 2008 (even if you participated in 2007) 	<ul style="list-style-type: none"> • To not be enrolled for 2008
Voluntary Group Accident Insurance (VGA)	<ul style="list-style-type: none"> • To enroll, disenroll or change coverage 	<ul style="list-style-type: none"> • No change in your Voluntary Group Accident Insurance Coverage

Important: It is your responsibility to thoroughly review your benefit enrollments for 2008 through the web page "PeopleSoft Open Enrollment" from Oct. 20-Nov. 9. This will be your only opportunity to make changes. HBE recommends that you print the "Enrollment Summary Page" as a record of your final selections.

Make your choices early, so that you don't forget to enroll if you need to!

2008 employee medical plan options; same choices as 2007

Retiree information begins on next page

Dental plan information is on page 10

This section outlines the medical plan choices for 2008 for employees, which are the same choices that were offered for 2007. To view detailed plan information, see the Medical Plan Comparison Chart and/or applicable Summary Plan Description at the OE website (<http://oe.sandia.gov>) outlining specific plan designs/features of the various options.

More information

Open Enrollment website:

<http://oe.sandia.gov> (for employees and retirees)
The open enrollment website will go active with 2008 Benefits Choices content on Oct. 3.

Sandia Labs Customer Service

Note: Many questions regarding Sandia health, benefits, and employee services issues can be addressed directly online via the HBE Customer Service website at <http://hbe.sandia.gov>.

- (NM) Benefits Customer Service Center, Hours: 8 a.m.-4:30 p.m. 505-844-HBES (4237) or 1-800-417-2634, ext. 844-HBES (4237)

- (CA) Benefits Helpline — 925-294-225



Employee	UnitedHealthcare Premier PPO	CIGNA Premier PPO	UnitedHealthcare Standard PPO	CIGNA In-Network	Kaiser HMO (CA only)
Type of Plan	Preferred Provider Organization (PPO)	Preferred Provider Organization (PPO)	Preferred Provider Organization (PPO)	Health Maintenance Organization Look-Alike	Health Maintenance Organization (HMO)
Provider Network in New Mexico	Presbyterian UNMH Independent providers	Lovelace Health System UNMH Independent providers	Presbyterian UNMH Independent providers	Lovelace Health System UNMH Independent providers	Not applicable
In/Out of Network Coverage	Both	Both	Both	In-network only	In-network only
Referrals to specialists required	No	No	No	No	For some services
Plan Design	Primarily coinsurance Out-of-network deductible	Primarily coinsurance Out-of-network deductible	Primarily coinsurance In- and out-of-network deductible	Copays No deductible	Copays No deductible
Plan Changes for 2008	None	None	None	None	None

Employee medical premium sharing — Effective Jan. 1, 2008

Good news from the Benefits Department for nonrepresented UHC and CIGNA PPO members! The premium-share amounts for the UnitedHealthcare (UHC) Standard PPO Plan, the UHC Premier PPO Plan, and the CIGNA Premier PPO Plan are essentially staying flat for 2008.

For nonrepresented employees, the CIGNA In-Network premium-share amounts are increasing on average by 5 percent. The CIGNA In-Network Plan required a rate adjustment, as it has been determined that the relative richness (or “value”) of the benefits of this Plan is actually slightly higher than the Premier plans (i.e., the other self-insured plans). Note: Individual plan rates for the self-insured plans are set to reflect the “value” of the plans (e.g., plan design, in/out-of-network benefits).

Represented employee premium shares are established according to the provisions in the applicable bargaining agreements.

Kaiser members will see significant increases in their premium-share amounts. While the self-insured plans’ costs have moderated through better vendor discounts and plan design changes, the insured rates for the Kaiser plan have increased by almost 25 percent over the last two years. The plan design offered by Kaiser is an “off-the-shelf” product and is developed by Kaiser. Therefore, due to the increased premiums charged to Sandia for the Kaiser HMO, the premium-share rates have been adjusted to better reflect the cost of that plan and have now been aligned with the CIGNA In-Network Plan.

For more information about monthly premium share (Class II, Retiree, Domestic Partner, etc.), visit the HR Self-Service Open Enrollment website at www.sandia.gov/resources/emp-ret/emp-oe.

Represented employees

The table below provides the monthly premium-share amounts for represented employees for each of the plans.

Medical plan and coverage	
UnitedHealthcare Standard PPO plan	
Employee only	\$53
Employee and child(ren)	\$96
Employee and spouse	\$109
Employee, spouse, and child(ren)	\$155
CIGNA In-Network plan	
Employee only	\$64
Employee and child(ren)	\$114
Employee and spouse	\$130
Employee, spouse, and child(ren)	\$184
CIGNA Premier PPO plan	
Employee only	\$63
Employee and child(ren)	\$113
Employee and spouse	\$129
Employee, spouse, and child(ren)	\$182
UnitedHealthcare Premier PPO plan	
Employee only	\$63
Employee and child(ren)	\$113
Employee and spouse	\$129
Employee, spouse, & child(ren)	\$182

Nonrepresented employees

The table below provides the monthly premium-share amounts for nonrepresented employees for each of the plans.

Medical plan and coverage	Tier 1*	Tier 2**	Tier 3†
CIGNA In-Network plan			
Employee only	\$69	\$85	\$101
Employee and child(ren)	\$124	\$153	\$182
Employee and spouse	\$142	\$175	\$208
Employee, spouse, and child(ren)	\$200	\$247	\$294
CIGNA Premier PPO plan			
Employee only	\$65	\$81	\$97
Employee and child(ren)	\$117	\$146	\$175
Employee and spouse	\$134	\$167	\$200
Employee, spouse, and child(ren)	\$189	\$236	\$283
UnitedHealthcare Standard PPO plan			
Employee only	\$7	\$23	\$39
Employee and child(ren)	\$13	\$42	\$71
Employee and spouse	\$15	\$48	\$81
Employee, spouse, and child(ren)	\$21	\$68	\$115
UnitedHealthcare Premier PPO plan			
Employee only	\$65	\$81	\$97
Employee and child(ren)	\$117	\$146	\$175
Employee and spouse	\$134	\$167	\$200
Employee, spouse, and child(ren)	\$189	\$236	\$283
Kaiser Permanente HMO plan (CA)			
Employee only	\$69	\$85	\$101
Employee and child(ren)	\$124	\$153	\$182
Employee and spouse	\$142	\$175	\$208
Employee, spouse, and child(ren)	\$200	\$247	\$294

* Tier 1: Base salary of up to \$75,000 as of January 1, 2008

** Tier 2: Base salary of \$75,001 to \$150,000 as of January 1, 2008

† Tier 3: Base salary of over \$150,000 as of January 1, 2008

Important: Employees are required to determine if their dependent qualifies as a qualified dependent under Internal Revenue Code Section 152 guidelines for the purpose of health care coverage. If your dependent is not a qualified dependent under the tax code, you are required to contact the Benefits Department to determine whether any imputed income may apply for that nonqualified dependent.



Retiree Open Enrollment information for 2008

What's new for retirees for 2008?

HBE wants to point out two very important changes for you to take note of during this Open Enrollment.

First, effective Jan. 1, 2008, for retirees enrolled in one of the UnitedHealthcare (UHC) Premier and Senior PPO medical plans, the administrator for your prescription drug benefit is changing from PharmaCare to Catalyst Rx. For detailed information see “Important Rx Drug benefit information for UnitedHealthcare members” on page 10. This change does not apply to retirees enrolled in the UnitedHealthcare (UHC) High Deductible Health Plan.

Second, new combo families (mixed Medicare primary

and non-Medicare primary) enrollment will be restricted. This means new enrollment to the Presbyterian MediCare PPO and Lovelace Senior Plan is only offered to individuals and families where all family members are Medicare Primary. Families already enrolled in the combination plans (UHC Premier PPO Plan with Presbyterian MediCare, or CIGNA Premier PPO/CIGNA In-Network paired with Lovelace Senior Plan) will be grandfathered.

Retirees will continue to receive an Open Enrollment booklet as well as a Medical Plan Comparison chart. If you want to make any changes for 2008, you will need to complete the Open Enrollment Change Form included in your Open Enrollment booklet and mail it

to the Sandia Benefits Department (postmarked by midnight Nov. 9). Look for your Benefits Choices Open Enrollment packet to arrive at your home address (for retirees and survivors) the week of Oct. 15. If you do not receive a booklet, contact the HBE Customer Service Center at 505-844-HBES (4237).

Note: If you make a change during Open Enrollment, you will receive a confirmation mailed to your home; otherwise you will not receive a confirmation after Open Enrollment ends. For medical plan information/changes, refer to the section titled Retiree Medical Plan Options. Also, refer to Retiree Medical Premium-Sharing for information on 2008 monthly premiums.

Steps for retirees to take during Open Enrollment

1) Review the Open Enrollment booklet carefully to learn of any changes in your benefits and premium-share increases and/or to identify any changes in benefits you want to make.

2) Attend an Open Enrollment presentation (schedule on page 10) to learn more about the plans and/or to talk to a medical plan representative (where available).

3) Determine whether you need to complete the Open Enrollment Benefit Change Form located in your Open Enrollment booklet according to the table below.

IMPORTANT: If you do not want to make any changes, you do not need to do anything. Your coverage(s) and dependent selections will continue into 2008.

Plan ahead — some questions to ask

- Do I need to add or drop any dependents? Detailed information about eligibility is included in the Retiree Open Enrollment booklet. Remember changes made during Open Enrollment are effective Jan. 1, 2008.

- Am I satisfied with my medical plan? Is my physician still in the network? If you are thinking about changing medical plans, you should review the vendor's website to

review the list of network providers.

For many people, cost is one of the key factors in choosing a medical plan. The Medical Plan Estimator is specifically designed to help you estimate that cost and is available to Non-Medicare Retirees. The tool can assist you in looking at both:

- What you are likely to pay for the services and supplies you need during the year; and

- The amount that comes out of your paycheck when you enroll in the Sandia Medical Plan.

You can find the Medical Plan Estimator online at www.sandia.gov/resources/emp-ret/ret-oe.

- (If married to another Sandian) — Am I satisfied with the current coverage arrangement? Remember that both Sandians must make these changes through

the paper-based Open Enrollment Benefit Change Form and/or web-based Open Enrollment system. Note: If a retiree is a dependent of an employee, the retiree will be enrolled in the applicable employee plan.

- Am I or my spouse turning 65 next year? How does this affect my medical coverage under the different plans? Do I want to switch medical plans based on changes in coverage?

Make your choices early, so that you don't forget to enroll if you need to!

	TAKE ACTION	NO ACTION
Medical Coverage	<ul style="list-style-type: none"> • To enroll if not currently enrolled • To change your current medical plan • To add or disenroll a dependent • To waive coverage 	<ul style="list-style-type: none"> • To continue coverage under current plan • If you waived coverage previously and wish to remain in this status
Dental Coverage	<ul style="list-style-type: none"> • To enroll if not currently enrolled • To add or disenroll a dependent • To waive coverage 	<ul style="list-style-type: none"> • If you waived coverage previously and wish to remain in this status

2008 retiree medical plan options: Medicare and non-Medicare

This section outlines the medical plan choices for 2008 for retirees which are the same choices that were offered for 2007. To view detailed plan information, see the Medical Plan Comparison Grid, the Retiree Open Enrollment booklet, and/or applicable

Summary Plan Description at the OE website outlining specific plan designs/features of the various options.

Need answers? See the benefits fair schedule on page 10

Non-Medicare	UnitedHealthcare Premier PPO	CIGNA Premier PPO	UHC High Deductible Health Plan	CIGNA In-Network	Kaiser HMO (CA only)
Type of Plan	Preferred Provider Organization (PPO)	Preferred Provider Organization (PPO)	Preferred Provider Organization (PPO)	Health Maintenance Organization Look Alike	Health Maintenance Organization (HMO)
Provider Network in New Mexico	Presbyterian UNMH Independent providers	Lovelace Health System UNMH Independent providers	Presbyterian UNMH Independent providers	Lovelace Health System UNMH Independent providers	Not applicable
In/Out of Network Coverage	Both	Both	Both	In-Network only	In-Network only
Referrals to specialists required	No	No	No	No	For some services
Plan Design	Primarily coinsurance	Primarily coinsurance	Coinsurance	Copays	Copays
	In and Out-of-network deductible	In and Out-of-network deductible	In and out-of-network deductible	No deductible	No deductible
Compatible with Health Savings Account	No	No	Yes	No	No
Plan Changes for 2008	None	None	None	None	None

Medicare	UnitedHealthcare Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian Medicare PPO (NM only)	Lovelace Senior Plan (NM only)	Kaiser Senior Advantage (CA only)
Type of Plan	Preferred Provider Organization (PPO)	Preferred Provider Organization (PPO)	Medicare Advantage Preferred Provider Organization (PPO)	Medicare Advantage Health Maintenance Organization (HMO)	Medicare Advantage Health Maintenance Organization (HMO)
Provider Network in New Mexico	Presbyterian UNMH Independent providers	Lovelace Health System UNMH Independent providers	Presbyterian	Lovelace Health System	Not applicable
In/Out of Network Coverage	Both	Both	Both	In-Network only	In-Network only
Referrals to specialists required	No	No	No	No	For some services
Plan Design	Primarily coinsurance	Primarily coinsurance	Copays	Copays	Copays
Plan Changes for 2008	None	None	* (see below)	* (see below)	None

Retiree medical plan premium sharing — effective Jan. 1, 2008

Retiree premiums vary based on when you retired, your years of service at the time you retired, as well as the plan and the level of coverage you choose

Important: Retirees are required to determine if their dependent qualifies as a qualified dependent under Internal Revenue Code Section 152 guidelines for purposes of health care coverage (seek advice from your tax adviser). If your dependent is not a qualified dependent under the tax code, you are required to contact the Benefits Department to determine whether any imputed income may apply for that nonqualified dependent.

Employees who retired prior to Jan. 1, 1995

Employees who retired prior to Jan. 1, 1995, will not be required to pay a premium share for themselves or any eligible Class I dependents at this time. (Exception: Retirees who retired prior to Jan. 1, 1995, but who currently pay a portion of their medical coverage will continue to do so.)

Employees who retired after Dec. 31, 1994, and before Jan. 1, 2003

Employees who retired after Dec. 31, 1994, pay a

* Plan Changes: Presbyterian Medicare PPO (NM only)

- In-Network:**
- Mental Health/Substance Abuse Office Visit from \$20 to \$25 copay.
 - Outpatient Rehab (Cardiac) from \$10 to \$0 copay.
 - Dental (Medicare-covered) from \$20 to \$25 copay.
 - Hearing Services (Medicare-covered) from \$20 to \$25 copay.
 - Hearing Services (Routine) from \$20 to \$25 copay.
 - Vision Services (Medicare-covered) from \$20 to \$25 copay.
 - Vision Services (Routine) from \$20 to \$25 copay.
 - Chiropractic (Routine) not covered.
- Out-of-Network:**
- Skilled Nursing Facility (days 21 to 100) from \$115 per day to \$125 per day.
 - PCP Office Visit from \$25 to \$30 copay.
 - Chiropractic (Medicare-covered) from \$35 to \$50 copay.

- Podiatry (Medicare-covered) from \$35 to \$50 copay.
 - Urgent Care from \$40 to \$50 copay.
 - Outpatient Rehab (non-cardiac) from \$25 to \$30 copay.
 - Outpatient Rehab (Cardiac) from \$25 to \$30 copay.
 - DME/Prosthetics from \$25 to \$40 copay.
 - Hearing Services (Medicare-covered) from \$35 to \$50 copay.
 - Hearing Services (Routine) from \$35 to \$50 copay.
- Prescription Drugs (Part D)**
- Generic (Retail) remains at \$5 copay.
 - Preferred Brand Name (Retail) from \$20 to \$35 copay.
 - Non-preferred Brand (Retail) from \$45 to \$55 copay.
 - Generic (Mail Order) remains at \$10 copay.
 - Preferred Brand Name (Mail Order) from \$50 to \$87.50 copay.
 - Non-preferred Brand (Mail Order) from \$135 to \$165 copay.

* Plan Changes: Lovelace Senior Plan (NM only)

- Outpatient Surgery from \$75 to \$50 copay.
- DME (Oxygen) from \$20 per month to \$0 per month.
- Prescription Drugs (Part D):
 - Preferred Generic (Retail) from \$10 to \$5 copay.
 - Preferred Brand Name (Retail) from \$20 to \$32 copay.
 - Non-Preferred Brand (Retail) from \$40 to \$62 copay.
 - Specialty Drugs (Retail) \$40 to \$62 copay.
 - Insulin (Novolin or Novolog) from Tier 2 to Tier 1 coverage
- Sleep Studies-Testing:
 - Daytime study from \$0 to \$50 copay.
 - Overnight study from \$0 to \$150 copay.
- "Bridges in Medicine" program cancelled.
 - Acupuncture \$15 copay, limit 20 visits per calendar year

monthly premium for coverage in Sandia's medical plans. The monthly premium-share amount will be deducted from your pension check. Use Table A to find your rate for your selected plans.

Employees Who Retired After Dec. 31, 2002

Employees who retired after Dec. 31, 2002, pay a percentage of the full premium based on their term of employment. The monthly premium-share amount will be deducted from your pension check.

- Use Table A if you retired with 30-plus years

- Use Table B if you retired with 25-29 years
- Use Table C if you retired with 20-24 years
- Use Table D if you retired with 15-19 years
- Use Table E if you retired with 10-14 years

See below and next page for retiree medical plan premium sharing tables

Retiree medical plan premium sharing tables for 2008

Retirees should use the tables here (Tables B-E are on the next page) to calculate their monthly premium sharing cost for medical insurance in

calendar year 2008. The applicable monthly premium share amount will be deducted from your pension check.

Table A (includes the 3 tables below)

Employees who retired after 12/31/1994 and before 1/1/03 OR after 1/1/03 with 30 or more years of service

Medicare Family (everyone in your family is Medicare primary)									
Number of Medicare	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian Medicare PPO	Lovelace Senior Plan	Kaiser Permanente Senior Advantage				
1	\$23	\$22	\$15	\$6	\$25				
2	\$45	\$45	\$30	\$13	\$50				
Non-Medicare Family (no one in your family is Medicare primary)									
Number of Non-Medicare	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO				
1	\$73	\$61	\$72	\$72	\$61				
2	\$145	\$122	\$144	\$144	\$123				
3	\$218	\$183	\$216	\$216	\$173				
Mixed Medicare and Non-Medicare Family (Your family has both Medicare primary and non-Medicare primary members)									
Medicare Plan:	UHC Senior Premier PPO	UHC Senior Premier PPO	Presbyterian Medicare PPO	Presbyterian Medicare PPO	Lovelace Senior Plan	Lovelace Senior Plan	Kaiser Permanente Senior Advantage		
Non-Medicare Plan:	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO	
Number of Medicare	Number of Non-Medicare								
1	1	\$95	\$83	\$94	\$88	\$76	\$78	\$78	\$86
2	1	\$118	\$106	\$117	\$102	\$91	\$85	\$85	\$101
1	2	\$168	\$144	\$167	\$160	\$137	\$151	\$150	\$137

Table A

Table A

Who should use this table?

Employees who retired after Dec. 31, 1994, and before Jan. 1, 2003

Employees who retired after Dec. 31, 1994 and before Jan. 1, 2003, pay a monthly premium for coverage in Sandia's medical plans. The monthly premium-share amount will be deducted from your pension check. Use Table A to find your rate for your selected plans.

Also . . .

Employees who retired after Dec. 31, 2002, and retired with 30+ years of service

More retiree premium sharing tables on next page . . .

Retiree medical plan premium sharing tables for 2008

Retirees should use the tables here (Table A is on the preceding page) to calculate their monthly premium sharing cost for medical insurance in calendar year 2008. The applicable monthly premium share amount will be deducted from your pension check.

Table B →

Who should use this table?

Employees who retired after Dec. 31, 2002, and retired with 25-29 years of service.

Table B
Employees who retired after 12/31/2002 with 25-29 years

Medicare Family (everyone in your family is Medicare primary)									
Number of Medicare	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian MediCare PPO	Lovelace Senior Plan	Kaiser Permanente Senior Advantage				
1	\$34	\$33	\$22	\$10	\$38				
2	\$68	\$67	\$45	\$19	\$75				
Non-Medicare Family (no one in your family is Medicare primary)									
Number of Non-Medicare	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO				
1	\$109	\$91	\$108	\$108	\$92				
2	\$218	\$183	\$216	\$216	\$184				
3	\$327	\$274	\$325	\$324	\$260				
Mixed Medicare and Non-Medicare Family (your family has both Medicare primary and non-Medicare primary members)									
Medicare Plan:		UHC Senior Premier PPO	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian MediCare PPO	Presbyterian MediCare PPO	Lovelace Senior Plan	Lovelace Senior Plan	Kaiser Permanente Senior Advantage
Non-Medicare Plan:		UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO
Number of Medicare	Number of Non-Medicare								
1	1	\$143	\$125	\$142	\$131	\$114	\$118	\$118	\$130
2	1	\$176	\$159	\$175	\$154	\$136	\$127	\$127	\$152
1	2	\$252	\$216	\$250	\$240	\$205	\$226	\$226	\$206

← **Table B**

Table C

Table C

Employees who retired after 12/31/2002 with 20-24 years

Medicare Family (everyone in your family is Medicare primary)									
Number of Medicare	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian MediCare PPO	Lovelace Senior Plan	Kaiser Permanente Senior Advantage				
1	\$56	\$56	\$37	\$16	\$63				
2	\$113	\$112	\$75	\$32	\$126				
Non-Medicare Family (no one in your family is Medicare primary)									
Number of Non-Medicare	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO				
1	\$182	\$152	\$180	\$180	\$153				
2	\$363	\$305	\$361	\$360	\$307				
3	\$545	\$457	\$541	\$540	\$434				
Mixed Medicare and Non-Medicare Family (your family has both Medicare primary and non-Medicare primary members)									
Medicare Plan:		UHC Senior Premier PPO	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian MediCare PPO	Presbyterian MediCare PPO	Lovelace Senior Plan	Lovelace Senior Plan	Kaiser Permanente Senior Advantage
Non-Medicare Plan:		UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO
Number of Medicare	Number of Non-Medicare								
1	1	\$238	\$209	\$236	\$229	\$190	\$196	\$196	\$216
2	1	\$294	\$265	\$292	\$256	\$227	\$212	\$212	\$253
1	2	\$419	\$361	\$417	\$400	\$342	\$377	\$376	\$343

← **Table C**

Who should use this table?

Employees who retired after Dec. 31, 2002, and retired with 20-24 years of service.

Table D →

Who should use this table?

Employees who retired after Dec. 31, 2002, and retired with 15-19 years of service.

Table D
Employees who retired after 12/31/2002 with 15-19 years

Medicare Family (everyone in your family is Medicare primary)									
Number of Medicare	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian MediCare PPO	Lovelace Senior Plan	Kaiser Permanente Senior Advantage				
1	\$79	\$78	\$52	\$22	\$88				
2	\$158	\$156	\$104	\$45	\$176				
Non-Medicare Family (no one in your family is Medicare primary)									
Number of Non-Medicare	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO				
1	\$254	\$213	\$252	\$252	\$215				
2	\$508	\$426	\$505	\$504	\$429				
3	\$762	\$639	\$757	\$756	\$607				
Mixed Medicare and Non-Medicare Family (your family has both Medicare primary and non-Medicare primary members)									
Medicare Plan:		UHC Senior Premier PPO	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian MediCare PPO	Presbyterian MediCare PPO	Lovelace Senior Plan	Lovelace Senior Plan	Kaiser Permanente Senior Advantage
Non-Medicare Plan:		UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO
Number of Medicare	Number of Non-Medicare								
1	1	\$333	\$292	\$330	\$306	\$265	\$275	\$274	\$303
2	1	\$412	\$371	\$408	\$358	\$317	\$297	\$297	\$354
1	2	\$587	\$505	\$583	\$560	\$478	\$527	\$527	\$481

← **Table D**

Table E

Table E

Employees who retired after 12/31/2002 with 10-14 years

Medicare Family (everyone in your family is Medicare primary)									
Number of Medicare	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian MediCare PPO	Lovelace Senior Plan	Kaiser Permanente Senior Advantage				
1	\$101	\$100	\$67	\$29	\$113				
2	\$203	\$201	\$134	\$57	\$226				
Non-Medicare Family (no one in your family is Medicare primary)									
Number of Non-Medicare	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO				
1	\$327	\$274	\$324	\$324	\$276				
2	\$653	\$548	\$649	\$648	\$552				
3	\$980	\$822	\$974	\$972	\$781				
Mixed Medicare and Non-Medicare Family (your family has both Medicare primary and non-Medicare primary members)									
Medicare Plan:		UHC Senior Premier PPO	UHC Senior Premier PPO	CIGNA Senior Premier PPO	Presbyterian MediCare PPO	Presbyterian MediCare PPO	Lovelace Senior Plan	Lovelace Senior Plan	Kaiser Permanente Senior Advantage
Non-Medicare Plan:		UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	UHC Premier PPO	UHC High Deductible Health Plan	CIGNA Premier PPO	CIGNA In-Network Plan	Kaiser Permanente HMO
Number of Medicare	Number of Non-Medicare								
1	1	\$428	\$375	\$425	\$394	\$341	\$353	\$353	\$389
2	1	\$529	\$477	\$525	\$461	\$408	\$382	\$381	\$455
1	2	\$755	\$649	\$750	\$720	\$615	\$678	\$677	\$618

← **Table E**

Who should use this table?

Employees who retired after Dec. 31, 2002, and retired with 10-14 years of service.

Important Rx drug benefit information for UnitedHealthcare members

Effective Jan. 1, 2008, members enrolled in one of the UnitedHealthcare (UHC) medical plans will receive their prescription drug benefit from Catalyst Rx rather than PharmaCare. Retirees enrolled in the UHC High Deductible Health Plan will continue to obtain their prescription drug benefits through UHC.

Catalyst Rx brings very competitive pricing that should help Sandia manage copay increases in the future. In addition, Catalyst Rx provides the highest level of customer service among the top 10 pharmacy benefit managers in the industry (according to a recent industry survey of employer groups). Catalyst Rx also coordinates with PayFlex, Sandia's Reimbursement Spending Account (RSA) administrator, to minimize the need for UHC members to submit prescription drug expenses to PayFlex for verification purposes under the tax code.

The benefits Welcome Kit members receive in December will contain new ID cards to use at the pharmacy. All covered members will be listed on the ID card and, to help prevent identify theft, the new cards will include unique Catalyst Rx member ID numbers.

Although the copay structure for 2008 is not changing, it is important to note that each administrator has its own preferred drug list; therefore, the cost for prescription drugs could change. The preferred drug list identifies which brand-name drugs will be dispensed at the lower copay. Review the Catalyst Rx preferred drug list to find out the preferred/non-preferred brand status of your drugs. The list will be available beginning Oct. 20 at www.catalystrx.com (user id and password is SNL).

Information on mail order prescription refills currently on file with PharmaCare as well as other information will be mailed from Catalyst Rx and/or the Sandia Benefits department in the coming months.

Beginning Jan. 1, 2008, UHC members must present the Catalyst Rx ID card when using a retail network pharmacy.

If you use your EHS or PharmaCare ID card, your prescription will be rejected and you will have to pay the full price, which is not eligible for reimbursement. The majority (99%) of the retail network pharmacies that you regularly access will continue to be a part of the network with Catalyst Rx.

HBE listened and took action: The improved Medical Plan Estimator Tool is available!

HBE is delighted to announce that the Medical Plan Estimator Tool has been updated to make the tool more accurate and user friendly. Tool users provided feedback indicating that when using the previous tool, it was difficult to determine expected medical costs because the tool didn't allow users to split out dependent costs for each family member, and the tool did not accurately calculate deductibles and out-of-pocket costs.

Sandia HBE worked with the tool originator to enhance the tool. The new tool allows the employee to enter a basic health status indicator ("generally well," "some health needs," or "significant health needs") for each covered family member (employee, spouse, and children), and then it uses this information to map into a default expected number of medical services, again for each person. The defaults can either be used as they are presented for each person, or they can be edited. This upgrade provides more guidance during the input phase of the model. The tool has also been modified to more accurately calculate family-level deductibles and out-of-pocket costs. Another convenience for employees is quick access to a flexible spending account calculator, which was added as a new tab to the tool. This enhancement will help you decide how much you might set aside on a pre-tax basis to cover out-of-pocket health plan costs.

Check out the improved Medical Plan Estimator Tool at <http://oe.sandia.gov>. There is a link under the Resources section of the Employee and Retiree Open Enrollment websites.

Benefits fairs/presentations

Employee benefit fairs

This year, the Health, Benefits, and Employee Services Center will be hosting several benefit fairs for employees. Come and ask your benefit questions of the Sandia health plan vendors and/or the benefits staff. Have your blood pressure checked by Sandia's Preventive Health staff.

New Mexico

- Oct. 22 — Area IV, Bldg. 962 Auditorium, 9 a.m.–4 p.m., (MDT)
- Oct. 24 — Steve Schiff Auditorium Lobby, 9 a.m.–4 p.m., (MDT)
- Nov. 5 — Steve Schiff Auditorium Lobby, 9 a.m.–4 p.m., (MDT)
- Nov. 6 — (Tuesday), Sandia Laboratories FCU, 1301 Britt Street SE, Research Park, 10 a.m.–3 p.m. (MDT)

California

- Oct. 30 — Bldg. 905 Mezzanine, 10 a.m.–2 p.m. (PDT)

Retiree/Survivor Open Enrollment presentations

This year, the Health, Benefits, and Employee Services Center will be hosting several Open Enrollment presentations for retirees/survivors.

Albuquerque

All presentations at the Winrock Theatre, 201 Winrock Center (all times MDT)

Non-Medicare-Primary Presentations

- Oct. 23, 8-9:30 a.m. • Oct. 25, 10:30 a.m.-noon • Nov. 1, 8-9:30 a.m.

Medicare-Primary Presentations

- Oct. 23, 10:30 a.m.-noon • Oct. 25, 8-9:30 a.m. • Nov. 1, 10:30 a.m.-noon

Livermore

All presentations at the Doubletree Club Hotel, 720 Las Flores Road (all times PDT)

Non-Medicare-Primary Presentations

- Oct. 29, 8:30-10 a.m.

Medicare-Primary Presentations

- Oct. 29, 10-11:30 a.m.

Employee Dental Plan options

The Dental Expense Plan (DEP) is the company-paid dental plan for employees and their eligible dependents. DEP covers certain preventive and diagnostic services in full and offers basic reimbursement of covered restorative services with annual and lifetime maximums.

The Dental Deluxe Plan (DDP) is a voluntary, employee-paid option that covers certain preventive and diagnostic services in full and offers an increased (approximately 25 percent) reimbursement of covered restorative services, as well as increased annual and lifetime maximums.

Dental Plan	Monthly Premium Charge – effective 1/1/08
Dental Expense Plan	No charge—Company-paid
Dental Deluxe Plan	Employee \$20
	Employee plus one Class I dependent \$30
	Employee plus two or more Class I dependents \$38

• Plan changes for 2008: none

Helpful Tip

You can benefit by staying in-network when seeking dental service. By seeing a Delta Dental PPO provider, you can reduce your out-of-pocket costs by taking advantage of Delta's lower negotiated rates. Delta Dental Premier USA provider rates are also negotiated, but they are slightly higher. Regardless of the provider you choose, you will receive the same reimbursement from Sandia because the dental plans reimbursement is based on a scheduled benefit. For more information about your dental benefits and to locate an in-network provider, visit www.consumertoolkit.com.

Ready or not: Sandia prepares for Labs-wide inspection of ES&H programs

Over the next several months, Sandia will have an opportunity to sharpen its planning skills as it prepares for DOE's Office of Health, Safety, and Security (HSS), Office of Independent Oversight, HS-64, Labs-wide inspection of Sandia's Environmental, Safety, and Health (ES&H) programs, scheduled for late January 2008.

The inspection will evaluate all aspects of integrated safety management at Sandia, from how the Labs accepts changes to orders and laws to how the Integrated Safety Management System (ISMS) is integrated throughout the Labs. Every aspect of Sandia's processes for developing, deploying, implementing, and executing effective and integrated safety and environmental practices will be scrutinized.

"The effective implementation of an overall ES&H program into line operations is critical to ensuring operational excellence, which simply put, means doing things well across all our operations," says Center 4100 Director Phil Newman. "More importantly, however, is that integration of ES&H across the labs ensures the safety and welfare of the workforce while also protecting the environment.

"In the current budgetary climate," says Phil, "it is more important than ever that Sandia exhibit its commitment to running this laboratory in an efficient and safe manner."

Preparations for the inspection are already underway after a successful "kick-off" meeting on Sept. 5. The meeting teamed Sandia Director Champions with Sandia Site Office points of contact, 4100 Center managers and subject matter experts, and Line Implementation Working Group members. A list of topical areas anticipated for the inspection (see inset box) was compiled based on recent HS-64 inspections, Sandia issues from past external ES&H related inspections, and current ES&H performance issues.

Since the HS-64 inspection teams will focus on line implementation of ES&H

programs, these topical areas have designated Director Champions who will lead teams to determine the existence, adequacy, and level of compliance with ES&H programs across the Labs. Teams will routinely report status and evidence during periodic meetings. The intent is to self-identify strengths and weaknesses prior to the HS-64 inspection, demonstrating the ability to identify and resolve issues and document continuous improvement. By taking this approach, says Phil, the Labs can minimize the number of HS-64 findings and continue a process of self improvement.

The proposed schedule for the upcoming HS-64 inspection is:

- Scoping Visit — Dec. 11-12
- Onsite Planning — Jan. 14-18
- Data Collection — Jan. 28-Feb. 8
- Validation/Closeout - Feb. 26-28

Sandia VPs have been briefed and are actively preparing their divisions for the inspection. Additionally, a website, <http://gpweb.sandia.gov/HS64>, is under development to provide weekly information from subject matter experts to the Line concerning requirements, lessons learned, FAQs and answers, and successes as well as other useful information to help the line prepare.

"The ES&H organization appreciates all personnel supporting and preparing for this inspection," says Bob Brandhuber, senior manager for ES&H and Sandia's project leader for inspection preparation. "We have an opportunity to show DOE that we are in control of our own destiny at Sandia. We should take advantage of that opportunity by being ready and identifying our own areas for improvement with a actionable course of action that corrects any deficiencies discovered."

Any questions on the HS-64 Inspection should be directed to Bob Brandhuber at rbrandh@sandia.gov or 845-1237.

#	TOPICAL AREA
1	Essential Systems Functionality for Nuclear and Selected Non-nuclear Activities and Facilities
1A (SSO)	DOE Field Element Line Management Oversight
2	Line Operations
3	Management and Feedback and Improvement (CAS) & Self Assessments
4	Work Planning and Control Core Functions of Integrated Safety Management (ISM)
5	Workplace Monitoring
6	Environmental Management Systems Impacts (EMS)
7	Safety Management for Pro Force Training
8	Safety System Component Procurement
9	Occupational Injury and Illness Investigations and Reporting
10	Electrical Safety and Lockout/Tagout (LOTO)
11	Construction and Facilities Safety
12	10CFR851 & Flow-down of Requirements to Subcontractors
13	Ergonomics, Slips, Trips and Falls
14	Explosives Inventory
15	Hoisting and Rigging
16	Radiation Protection

Sandian Andres Tabios makes transition from Green Beret to Sandia Pro Force instructor

By Iris Aboytas

He could have been picking pineapple and cutting sugar cane like most of his family has done in Hawaii, but Andres Tabios (4212) took a different path. He joined the military and became a Green Beret. He didn't just become a Green Beret — he trained soldiers to be Green Berets.



IN TRAINING — Andres Tabios has traveled a long way from the pineapple and sugar cane fields of his youth in the Philippines to his role as a trainer with Sandia's Pro Force. (Photo by Randy Montoya)

Andres grew up in a farm in a small village (barrio) in central Luzon, one of the three main islands in the Philippines.

"We lived in a thatch house with dirt floors," he says. "We had no electricity or running water."

He is the youngest in his family. He has two sisters, Herminia and Teresita, and a brother, William.

"My dad, Felino, and mom, Lourdes, were very hardworking," he says. "I would not see them very much. They were always working. My mother was the strict one in the family. My dad was more laid back. Life in the Philippines was hard."

His family planted rice in knee-deep water during the rainy season and harvested it during the summer. As a young boy he was up before sunrise. He would feed the pigs and chickens, take the water buffalo (kalabaw) to graze in the field, eat breakfast, and walk about one-third mile to school. He would perform the same chores after school.

When Andres was in sixth grade he lived with relatives in Manila while he continued his education. During school breaks he would go back and help on the farm. He moved to Hawaii with his family when he was 17 years old.

Andres joined the military after high school graduation. Joining the military was not something his family readily endorsed. They agreed after he explained the advantages.

"I was a cook in the military," he says. In reality, he spent close to half of his 23 years in Special Forces. He was a weapons specialist, an intelligence sergeant, and detachment

operations sergeant on an Operational Detachment A-Team. He was a senior cadre instructor for Special Forces at the US Army John F. Kennedy Special Warfare Center and Schools at Fort Bragg, N.C. when he retired.

Andres loved the military but hated being away from his family. He and his wife, Somchit, have three daughters, Elizabeth, 21, and twins Andrea and Sandra, 23.

"When my daughters tell me, 'Dad you weren't there,' it really bothers me," he says. "I was away from home nine to 10 months out of the year. The operational tempo within the Special

Operations community is very high. My wife is the nucleus and heart of our family. She made sure everything ran smoothly. She has been my number one supporter."

After Andres retired from the military he became an instructor at the National Training Center (NTC), formerly the Central Training Academy (CTA). He trained government and non-government personnel in basic and advanced weapons marksmanship, tactical training, etc. While there, he had the opportunity to come to Sandia, and he took it.

"I truly appreciate the diversity of our Pro Force," says Andres. "I am fortunate I can provide training from personal experience, not just from a book. I can enlighten the Pro Force on what terrorists would do, who they would approach, and how they themselves would feel. I have been there."

After two and a half years of juggling work, school, family, and studying, Andres was able to make his dream come true last year. With support from his family and Sandia, he earned a degree in criminal justice administration from the University of Phoenix. He had been taking classes all along.



RIDING THE BUFFALO — Andres Tabios (at right) travels back to the Philippines from time to time to keep in touch with his roots. (Photo courtesy of Andres Tabios)

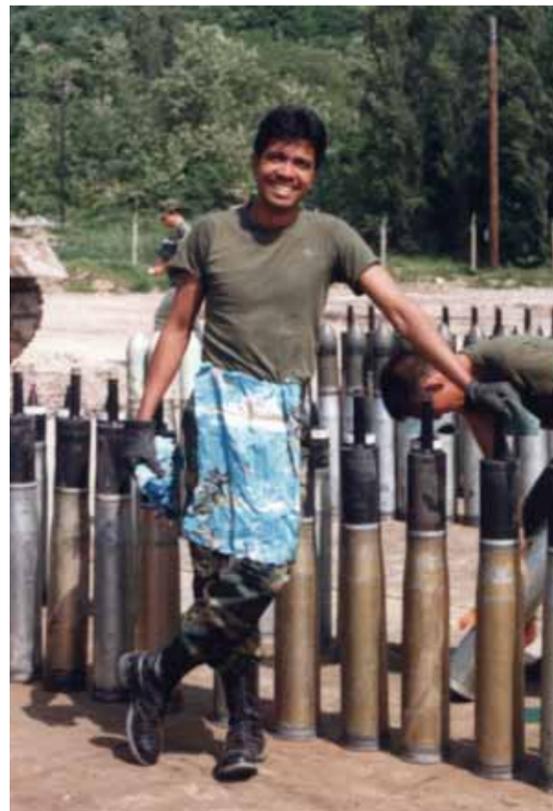
"I miss jumping out of planes but those days are gone. I look forward to helping and contributing to Sandia. I am proud to be a Sandian."

— Andres Tabios

"I think my daughters were actually proud of me," he says. "It was awesome. I felt such joy. During graduation, I heard them murmur, 'Dad is old, but he is getting a degree.' I am OK with that. I know I am not a pup anymore, but I am proof that with perseverance, hard work, and sacrifice, most things are possible."

Well, maybe now he would be at home more — no, that did not happen. Andres quickly applied, got accepted, and after sixteen weeks of training and 160 hours of on-the-job-training, became an Albuquerque Police Department reserve officer. Now he patrols our city once a month. "I believe in helping and giving back to the community," says Andres. "I also believe that learning is constant. You cease to exist if you stop learning. If I get to a point where my humility is gone, I will hop on a plane to the Philippines and ride water buffalo as I did when I was a child. That will bring back my focus."

"My family and I enjoy Albuquerque," he says. "It was time that I go home to my family every night. I miss jumping out of planes, but those days are gone. I look forward to helping and contributing to Sandia. I am proud to be a Sandian."



NETTY-GRITTY — As a young US Army recruit Andres Tabios cleaned artillery rounds.

Books Are Fun Sandia's 2007 EPC/United Way Campaign Kickoff

Employee Caring Program

Book Fair

See what's new!

Bring your shopping list to the book fair! You'll find exactly what you want in our large selection. Shop in the convenience of your workplace. Save on an incredible selection of books and fine gift items.

Employee Caring Program

Celebrate 50 Years of Giving

Steve Schiff Auditorium
Tuesday thru Thursday
October 2nd, 3rd, & 4th
10:00 am – 2:00 pm
Watch for the Traveling B-B-Q on Wednesday out in front

Bldg. 811 – Rm. 218 & 220
Monday, Oct. 8th
11:00 am – 4:00 pm
Tuesday & Wednesday
Oct. 9th and Oct. 10th
9:00 am – 4:00 pm

Thunderbird Cafeteria
Tuesday thru Thursday
October 16th, 17th, 18th
10:00 am – 2:00 pm