

NewsLetter

Week of October 23, 2006

Vol. 7, No. 22

WIPP shipment milestone highlights improved processes, productivity

From left to right, Joshua Lopez of TRU Waste Project Support, Robert Semon and Ronnie Lee, both of Earth and Environmental Sciences Carlsbad Operations, carefully load drums into a TRUPACT-II container for the 100th shipment of 2006 to the Waste Isolation Pilot Plant in Carlsbad. Two TRUPACT-II containers were transported as part of the shipment.



by James E. Rickman

The Laboratory recently reached a major milestone in the realm of transuranic waste — transporting its 100th shipment for 2006 to the Waste Isolation Pilot Plant this month.

“We’ve never been able to move more than 100 shipments out of here in a 12-month period,” said Richard Mullen of Tru Waste Project Support (WS-TWPS), noting that the Laboratory hopes to complete about 130 shipments by the end of the calendar year. Last year the Laboratory completed about 50 shipments.

The difference, said Lane Galle of WS-TWPS, is an improvement in handling and characterization processes that has re-energized personnel.

“Starting from management on down, we have wall-to-wall dedication by the people in this group who are performing the work,” Galle said.

In addition to great people, Mullen said, waste handlers and shippers have improved, and continue to improve, their processes to optimize efficiency. In the past, characterization processes such as radiography and other non-destructive assay procedures took place at different facilities, necessitating shipment of drums back and forth to various locations. Now, characterization processes for TRU waste are lined up in one location, improving turnaround time for each waste drum from selection to shipment.

Certification to meet WIPP’s strict waste acceptance criteria is handled on site by a Carlsbad-based program known as the Central Characterization Project (CCP). The CCP selects drums for shipment and ensures certification of each, a rigorous process that typically took the most time in the past before CCP was located on site, said Galle and Mullen.

Once certified, drums move to the Laboratory’s Radioassay and Nondestructive Testing Facility (RANT) for loading into TRUPACT-II containers that are shipped to Carlsbad.

“Commonly, we are able to get a drum shipped to WIPP on the same day we receive it here at the RANT,” said Mullen. “We have had zero personnel injuries in the RANT for at least the last one and a half years. We are proud of our safety record. We have excellent teamwork here in the RANT and in CCP.”

Before a truck carrying TRUPACT-II containers leaves Laboratory property, each is inspected under procedures established by the New Mexico Department of Public Safety’s Motor Transportation Division.

Since WIPP shipments began in 1998, the Laboratory has transported more than 5,000 drums to WIPP.



Richard Montoya, left, and Ronnie Parker of TRU Waste Project Support and Ronnie Lee of Earth and Environmental Sciences Carlsbad Operations begin the process of building a payload of 55-gallon drums that will be loaded into a TRUPACT-II container as part of the 100th shipment of 2006 to the Waste Isolation Pilot Plant. The black marks on the drums are previous markings that have been painted over; strict waste acceptance criteria at WIPP prohibit extraneous labels on drums and spray paint is used as opposed to scraping in order to preserve drum integrity and follow principles of ALARA — keeping potential exposure to radiation “as low as reasonably achievable.” Photos by Sandra Valdez, Records Management and Media Services and Operations


NewsLetter

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Ergonomics tips

October is Ergonomics Month and the following tips have been provided by the Industrial Hygiene and Safety (IHS) Division:

Stop work if pain persists — Everyone has an occasional ache or pain, but if pain persists and gets worse over time, don't continue to "work" though the pain. Stop work and visit Occupational Medicine.

Document holders — To avoid static awkward neck postures, place an adjustable document holder between monitor and keyboard.

Phone use — Cradling the phone can cause neck and shoulder pain. If you spend a lot of time on the phone, consider getting a headset.

Breaking news — Frequent short breaks (5 minutes every hour) away from the computer can help prevent overuse and eye strain problems.

Reaching — Place frequently used objects close to the body to minimize over-reaching and the risk of neck and back injuries.

Computer vision — Use the 20/20/20 Rule. Every 20 minutes, take 20 seconds, and look 20 feet away.

Mousing — Do not plant and pivot wrists on the work surface while using a computer mouse. Visit the Ergo Demo Room (http://int.lanl.gov/safety/ergonomics/ergo_demoroom.shtml) to try alternative mousing devices to reduce stress to the hand and wrist.



Lifting — Avoid lifting heavy objects from the floor and minimize lifting objects above shoulder height. Arrange storage areas so heavier items are stored between knee and shoulder level. When lifting, use both hands, keep the load close to the body and avoid twisting your body.

Pushing and pulling — Pushing objects is preferable to pulling, because it places less stress on the shoulders.

Laptops — Use a docking station for the laptop with an external monitor and keyboard when using the laptop as a desktop computer. Contact computer support for more information on this set-up.



Energy secretary speaks to employees

by Hildi T. Kelsey

Department of Energy Secretary Samuel Bodman stressed the importance of the work being done at Los Alamos and its impact on national security at a talk in the Laboratory's National Security Sciences Building at Technical Area 3.

Bodman and Linton Brooks, National Nuclear Security Administration director, were at Los Alamos for briefings on Lab programs and tours of several facilities.

Bodman mentioned several Lab projects he believes directly contribute to the country's safety and security, such as the Roadrunner petascale supercomputer, which he said would "prove an invaluable tool" to ensure the integrity of the nation's nuclear stockpile. He also noted the timely refurbishment of the B61 — mentioning that it was completed on schedule.

He also was impressed with the Laboratory's increased and continued cooperation with other facilities in the DOE complex, specifically citing the Center for Integrated Nanotechnologies, a joint research effort between Los Alamos and Sandia national laboratories.

"Los Alamos continues to set the leadership pace in working with others," said Bodman.

In the spirit of "friendly cooperation," he also mentioned the "healthy" competition between Los Alamos and Lawrence Livermore National Laboratory for the contract to build the Reliable Replacement Warhead. Bodman said he was pleased with the terrific work both labs have done, referring to the warhead designs submitted to DOE.

In terms of safety, Bodman said he was happy with the Lab's progress in that area, but stressed that there is room for improvement. "Safety is all of our collective responsibility ... safety has to be baked into how we go about doing our jobs," he said.

Along these lines, he discussed the recently formed Office of Health, Safety, and Security, which he said is designed to "help formulate and implement health, safety, and security policy for the department, provide assistance to DOE sites, conduct oversight through rigorous field inspections, and carry out enforcement activities."

"I have been criticized for making this organizational change. I resent it. I am proud of what we have done and hopeful as we go forward," said Bodman.

To reinforce the concept behind HSS, Bodman articulated the principle of functional accountability — saying people in charge of a subject matter should have oversight over that area and work with you. "It is like having [an entire] law firm instead of a lawyer," he said.

Bodman also complimented Lab employees for their flexibility during the contract transition and said he is positive about the Lab's current management. "The Department [of Energy] has increasingly high expectations of all our contractors ... but I have great confidence in Mike [Anastasio]."

He closed with praise to Los Alamos and its employees. "You will all be very important in bringing engineering and science to bear ... Los Alamos is a great triumph to the history of science in the world. I honor you and congratulate you for that.

"We are the nerds of the federal government, and I am the chief nerd. And, I am proud of it. You better pay attention to what we say," Bodman said.



Department of Energy Secretary Samuel Bodman spoke to Laboratory personnel in the National Security Sciences Building Auditorium at Technical Area 3.



Department of Energy Secretary Samuel Bodman looks at the Pentagon 9/11 memorial outside the National Security Sciences Building. Laboratory Director Mike Anastasio, center, also takes a moment to reflect as Patrick Woehrle of the Government Affairs Office looks on. Photos by LeRoy N. Sanchez, Records Management and Media Services and Operations

Los Alamos NewsLetter

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Los Alamos National Laboratory is a multidisciplinary research institution engaged in strategic science on behalf of national security. The Laboratory is operated by a team composed of Bechtel National, the University of California, BWX Technologies and Washington Group International for the Department of Energy's National Nuclear Security Administration.

Los Alamos enhances national security by ensuring the safety and reliability of the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction, and solving problems related to energy, environment, infrastructure, health and global security concerns.



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Less expensive fuel cell may be possible



Rajesh Bashyam of Sensors and Electrochemical Devices assembles a polymer electrolyte fuel cell for testing in one of the Laboratory's fuel-cell laboratories. Photo by Karen Kippen of Communication, Arts, and Services

Replacing platinum with nonprecious metal composite could reduce cost of hydrogen fuel cells

by Todd Hanson

Laboratory scientists have developed a new class of hydrogen fuel-cell catalysts that exhibit promising activity and stability. The catalysts are made of low-cost nonprecious metals entrapped in something called a heteroatomic-polymer structure, instead of platinum materials typically used in fuel cells.

In research published recently in the scientific journal *Nature*, Los Alamos scientists Rajesh Bashyam and Piotr Zelenay of Sensors and Electrochemical Devices (MPA-11) describe tests conducted on a cobalt-polypyrrole-carbon composite. The composite, consisting of cobalt, polymer, and carbon, is a byproduct of research aimed at developing low-cost nonplatinum catalysts for the polymer electrolyte fuel-cell cathode. While the electrical energy producing activity of the catalyst is lower than that of platinum-based catalysts used in polymer electrolyte fuel cells, the new material shows exceptional performance stability for more than one hundred hours of continuous testing, a result never before obtained with nonprecious metal catalysts in polymer electrolyte fuel cells.

"Besides being made of inexpensive and environmentally benign materials," said Zelenay, "the chief advantage of these composite catalysts for oxygen reduction is that they can operate in the acidic environment of the polymer electrolyte fuel cell."

Bashyam and Zelenay are investigating the nature of catalysts in a variety of composites. They also are part of a larger Laboratory effort aimed at developing new catalyst and electrode structures that could increase the current output from fuel cells.

According to Ken Stroh of MPA-11, program manager for the Los Alamos fuel-cell effort, "The two biggest obstacles in making a commercially viable fuel cell have traditionally been high cost and inadequate durability. Our focus at Los Alamos is to attack those obstacles as a system in which you simultaneously strive for lower costs and higher durability."

The Department of Energy's Office of Hydrogen, Fuel Cells and Infrastructure Technologies funds much of the polymer electrolyte fuel-cell research at Los Alamos.

Los Alamos and Chevron form strategic alliance

by Hildi T. Kelsey

You can't squeeze blood from a stone. However, it turns out that you can heat oil out of rocks. The Laboratory and Chevron Corporation have launched a joint research project to improve the recovery of hydrocarbons trapped in oil shales and slow-flowing oil formations.

The goal of the Los Alamos-Chevron collaboration is to develop an environmentally responsible and commercially viable process to recover oil and natural gas from Western U.S. oil shales. The joint research and development effort will focus on oil shale formations in the Piceance Basin in Colorado. The work will include reservoir simulation and modeling, as well as experimental validation of new recovery techniques, including in-situ processing.

Oil shales, sedimentary rocks containing a high proportion of organic matter called kerogen, can be mined and converted to oil or natural gas through a heating process called retorting. An alternative process (still in the experimental stage), called in-situ retorting, involves heating the oil shale underground and then pumping the liquid to the surface. The U.S. Geological Survey estimates the United States holds 2 trillion barrels of oil shale resources, with about 1.5 trillion barrels of those resources located in the western United States, primarily in Wyoming, Colorado, and Utah.

"Energy security is one of the greatest challenges facing the nation and developing new sources of energy, including hydrocarbons, is of paramount importance," said Terry Wallace Jr., acting principal associate director for the Science, Technology, and Engineering (PADSTE). "The Chevron-Los Alamos alliance links important efforts in energy security with Chevron's research to develop technologies that can brighten our energy future."

'Energy security is one of the greatest challenges facing the nation and developing new sources of energy, including hydrocarbons, is of paramount importance.'

Chevron, one of the world's leading energy companies with more than 53,000 employees, is one of several energy companies that has applied to participate in the Bureau of Land Management's research, development and demonstration leasing program in the Piceance Basin. Pending approval from BLM, Chevron intends to use its 160-acre lease in the Piceance Basin to test new technologies developed through its alliance with Los Alamos.

The joint research project will be conducted under the Strategic Alliance for Energy Solutions launched by Los Alamos and Chevron in 2004. The alliance supports Los Alamos in its mission, on

behalf of the Department of Energy, to advance the national, economic, and energy security of the United States through scientific and technological innovation. It also addresses Chevron's strategy to develop innovative research and educational partnerships within the energy industry.

"The alliance with Los Alamos already has led to several breakthroughs in oil and gas technology, including the reduction of ultra-high casing pressures in deepwater wells and improved well performance," said Mark Puckett, president, Chevron Energy Technology Company. "Oil shale resources offer exciting potential but present significant technological and economic challenges that will be

addressed by our alliance. We expect our collaboration with Los Alamos will lead to further advances that will enhance our ability to recover oil reserves in the United States."

The research and development work by the alliance will be performed in Los Alamos as well as at Chevron's technology center in Houston. Over the past two years, Chevron and Los Alamos have cooperated on a variety of projects and breakthrough technologies, including radio frequency telemetry, advanced sensor technology for the collection and transmission of oil well data, and the mitigation of deepwater ultra-high casing pressures.

Anastasio and Wallace discuss the state of Los Alamos science

by Todd Hanson

Which areas of science should the Laboratory pursue in 20 years? And how can the Laboratory's scientific successes help guide future goals? Laboratory Director Mike Anastasio and Terry Wallace, acting principal associate director for Science, Technology and Engineering (PADSTE), posited these and other questions to employees at a meeting Tuesday in the National Security Sciences Building Auditorium.

Topics for discussion included the plans, mission, vision, and priorities for science investment and the role that science and technology has in the annual assessment of Los Alamos National Security, LLC, as the Laboratory's manager.

Anastasio said the Laboratory should plan for science in the near term and decades into the future. As an example, he used the Roadrunner computer, which will soon give the Laboratory petaflop-class computing capabilities, and with that, the capacity to do unprecedented modeling and simulation science. He then challenged employees to consider what great science might be accomplished with Roadrunner, and with the generations of even more powerful computers that could come in Roadrunner's wake.

Anastasio urged Laboratory scientists to consider what kind of science the Laboratory should lead the world in twenty years from now, as well as think about any major experimental machines or new facilities that might be needed.

Wallace expanded upon the director's ideas and described the process by which a legacy of scientific successes might be built upon to create the future state of Los Alamos science. Wallace noted that the Laboratory has historically served a vital need in national security science by confronting some of the nation's largest and most complex problems.

"In the future, however, we will need to be more agile. Being agile means being able to 'anticipate, innovate, and deliver' science," he said.

Wallace then unveiled the four elements to the science planning process: people, scientific and national challenges, budget, and facilities.

"As in the past, people will remain Los Alamos' greatest strength and most promising asset," said Wallace.

He emphasized that the Laboratory intends to continue to recruit and retain the best and the brightest science has to offer. This, he notes, includes foreign national scientists. "To that end, the Laboratory's four institutes will serve to help attract, train and retain technical employees.

"The work of science in the future is destined to remain that of addressing scientific and national challenges," he said.

The current list of Grand Challenges were



Terry Wallace, acting principal associate director for Science, Technology, and Engineering, talks about the Laboratory's science goals and future plans during a recent all-employee meeting. Photos by LeRoy N. Sanchez, Records Management and Media Services and Operations

laid out earlier this year as a series of scientific and engineering "Grand Challenges" that Laboratory management, the National Nuclear Security Administration and Department of Energy considered essential to maintaining the Laboratory's intellectual vitality.

Grand Challenges

1. Fundamental science underlying nuclear performance for our stockpile stewardship mission.
2. Worldwide detection of nuclear materials and their dynamic response.
3. Fundamental understanding of materials and their dynamic response.
4. Beyond the Standard Model to understand the Universe — stellar formation, cosmology, dark energy, dark matter.
5. High-temperature superconductivity from 5f electrons for energy efficiency and support of actinide sciences.
6. Carbon-neutral fuel cycle — from energy efficiency, to carbon sequestration, to the administration's new Global Nuclear Energy Program initiative.
7. Complex systems — how to make system-level predictions, for example, at the intersection of energy, environment, and life sciences.

Wallace noted that planning for science must also include acknowledging certain budget realities now and in the future. Not only will the current Continuing Resolution continue to affect research budgets, but the Laboratory needs to have rates that more accurately reflect costs, and costs have risen.

He explained that for the 2007 fiscal year, labor costs have increased 7 percent from current year due to compensation increases

and increases in employer-paid employee benefits. This will be a cost increase to direct and indirect programs. To manage these increases, Laboratory management has targeted a 10 percent reduction to all indirect budgets (general administrative, I/S, Org Support, and Recharge) and a 50 percent reduction in G&A investments. There also will be differential rates for non-national security science customers like DOE Office of Science programs, DOE Technology programs, and work for other like the National Institutes of Health and NASA. Those rates will be 33 percent G&A versus 37 percent for Defense Programs. LDRD has a current budget level of \$108 million in fiscal year 2007 compared to \$102 million in fiscal year 2006.

These changes are designed to help the Laboratory this year and into the future as the Laboratory prepares for possible changes in funding, Wallace explained.

"Let me remind you," said Wallace, "that we currently are getting 56 percent of our funding from Defense Programs funding, but if this shrinks,

we need to be prepared to provide science value to the customers that come forward."

Regarding Laboratory facilities, Wallace noted that the current nine million square feet of space is too much and said the Laboratory needs to reduce that footprint, but in a way that allows the Lab to fulfill its mission effectively. He said with prudent planning these reductions could go hand-in-hand with current construction efforts.

He said projects like the Los Alamos Neutron Science Center (LANSCE) refurbishment and the Chemistry and Metallurgy Research Replacement Project, as well as any future signature experimental facility, need to be considered in light of planning questions. For example, where is the post-modern stockpile stewardship program going, and how is Threat Reduction going to respond to new and emerging threats? From the basic science side, what lies beyond the current realm of nanoscience? What advances are possible in information science, and what are the realities of fusion for energy?

Wallace ended the talk with some insight into the performance measures by which DOE will assess Los Alamos National Security and the Laboratory in the future. Of the several Performance Based Incentives (PBI) provided in the Los Alamos National Security management contract, PBI Number Five has four elements that pertain to science, he explained. The contract stipulated that the Laboratory would continue to maintain and develop its scientific work force along with maintaining critical science, technology and engineering skills for current and future NNSA and DOE missions. The Laboratory also would continue to engage in collaborative research and support DOE's Global Nuclear Energy Partnership.

A special thanks for a job well done

Forty-five Defense Programs Awards of Excellence also given

Laboratory employees who worked at Technical Area 18 (Pajarito Site) over the past sixty years recently received a special honor from the National Nuclear Security Administration.

In a ceremony at the Laboratory's National Security Sciences Building, Tom D'Agostino, NNSA deputy administrator for Defense Programs, presented Doug Beason, associate director for Threat Reduction (ADTR), a Meritorious Service Award commending TA-18 workers for their contributions to national security.

"Experiments at TA-18 supported stockpile stewardship, nuclear criticality safety, nonproliferation, nuclear emergency response, threat reduction, environmental management and materials disposition programs throughout the DOE complex, other federal agencies and the global nuclear industry," said Glenn Mara, principal associate director for Weapons Programs (PADWP). "I am very pleased that NNSA is recognizing Pajarito Site for its many contributions to our nuclear security and safety during its distinguished sixty-year history."

D'Agostino also presented 2005 Defense Programs Awards of Excellence to several hundred Laboratory employees for their outstanding achievement. Forty-five awards were given to individuals and members of small and large teams in the Lab's weapons program. Individual awards went to David Hollowell of Navy-1 (X-2-N1) for excellence in weapons surveillance and Joel Leeman of PADWP for outstanding program and project manage-



Tom D'Agostino, left, National Nuclear Security Administration deputy administrator for Defense Programs, presents Doug Beason, associate director for Threat Reduction, with a Meritorious Service Award commending TA-18 workers for their contributions to national security during the past sixty years. The plaque was presented during a ceremony at the Laboratory's National Security Sciences Building. Photos by Sandra Valdez, Records Management and Media Services and Operations

ment within Readiness in Technical Base and Facilities or RTBF. More than 40 separate teams garnered awards for working on virtually every aspect of the weapons program, including proton radiography, radiation transport, high explosives research, materials science, dynamic experiments, computer modeling and support, significant findings of interest in weapons surveillance, life extension programs, and support for the Secretary of Energy.

"It's not until you see the long list of

accomplishments that you fully grasp all that's been done during this time of tremendous change," said D'Agostino. "From a grateful nation, I applaud all of you and all of your outstanding work."

Defense Programs Awards of Excellence are given to both federal and contractor employees for significant achievements in quality, productivity, cost savings, safety, or creativity in support of the nuclear weapons program.



Museum hosts annual high-tech Halloween

Follow your ears to the Laboratory's Bradbury Science Museum for the 12th annual High Tech Halloween on Friday (October 27).

The theme of this year's event is "The Science of Sound."

High-Tech Halloween is from 4 to 7 p.m. and is free and open to the public.

High-Tech Halloween is held in conjunction with many downtown merchants who take part in Los Alamos' Main Street Halloween activities. Activities are geared for the elementary-school-age student, but almost any age will see that fun and learning come easily on this evening, said Liz Martineau of the museum.

Registration is not needed, but parents or responsible adults are asked to accompany their children.

The Bradbury Science Museum is located at 15th Street and Central Avenue in downtown Los Alamos. Museum hours apart from special events are 10 a.m. to 5 p.m., Tuesday through Saturday and 1 to 5 p.m., Sunday and Monday.

For more information, contact the Bradbury Science Museum at 7-3157.

UC commemorative book available through LANL Foundation

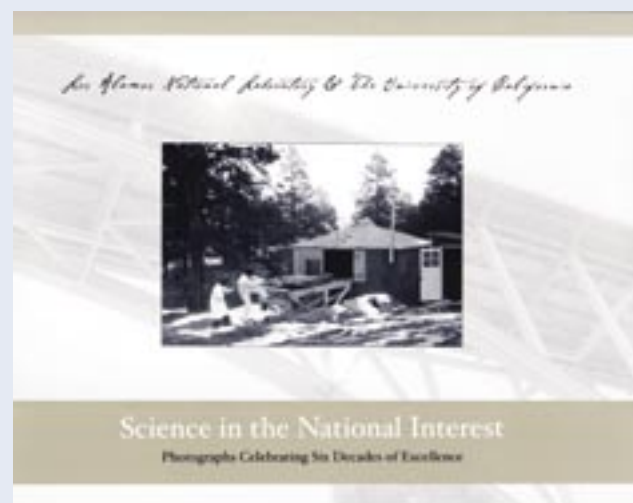
The 225-page coffee table book from the University of California (UC), *Science in the National Interest — Photographs Celebrating Six Decades of Excellence*, can now be purchased through the Los Alamos National Laboratory Foundation.

The University of California published the book as a gift to employees — UC retirees received a CD — earlier this summer. The University of California operated the Laboratory from its Manhattan Project inception in 1943 until May 31 of this year.

"I have had a couple hundred requests from former employees, retirees, contractors, people who knew people in the book, and even employees who wanted an additional copy," said Linda Anderman of the Community Programs Office (CPO).

To facilitate this demand, UC donated additional copies of the book to the Laboratory Foundation. Books can be purchased directly from the foundation for \$25 each. The foundation address is 1302 Calle de la Merced, Suite A, in Española. Call Sally Gallegos at 505-753-8890, extension 18, to place an order. Books can be shipped to an individual for a nominal cost. All proceeds will go toward the LANL Foundation Scholarship Fund.

The book includes a forward from UC President Robert Dynes and has hundreds of images, black and white and color, of historical events at the Laboratory. The book is broken down by decade, and captions accompany the photos.



So... what do you think?

Q: The majority of Laboratory employees commute to work using a motorized vehicle, whether they live in Albuquerque, Chimayo, or North Mesa. With safety in mind, do you routinely have your vehicle serviced for winter-weather driving? If so, how soon before winter and what do you have checked?



Helen Boorman of the Research Library (STBPO-RL)

Yes we do, because of the weather conditions we have here. We do it in the fall before any inclement weather begins.



Stephanie Martinez of Subcontracts (ASM-SUB)

I usually have everything checked on my car early in the fall. I also make sure to put a snow scraper in my trunk just in case.



Omar Wooten of B61 Systems Engineering (W-1)

I put so many miles on my car that I have it checked all the time. I pretty much keep my eye on things just to be safe.



Margaret Hoge of the Government Affairs Office (CGA-GAO)

No, I like to get the oil changed before the light comes on. I don't routinely service my vehicle before the winter.



Larry Lucero of Contract Assurance (CAO-DS)

Yes, around September or October, I check my wipers and put on the winter ones. I also check my tires and make sure I have jackets, energy bars and extra water in the car in case I should need them.



Lee Steck of Geophysics (EES-11)

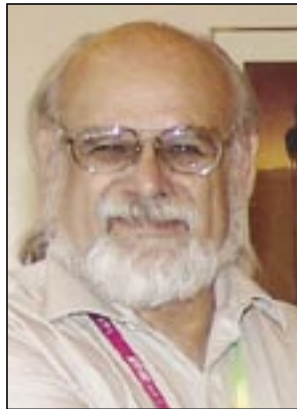
I usually have it serviced every month and a half or so, so I don't look at it specifically for winter. I like to keep my car as safe and reliable as possible and I do keep a spare hat, gloves, and a coat just in case.

PEOPLE



Voss is new Health Physics Society Fellow

Tom Voss of Health Physics Operations (RP-1), a Laboratory radiation toxicologist, is a new Fellow of the Health Physics Society. He is one of only two Lab employees who are fellows of this society.



Tom Voss

The other HPS Fellow, **Ray Guilmette** of Health

Physics Measurements (RP-2) presented Voss with a plaque at a recent ceremony.

The Health Physics Society promotes occupational and environmental radiation safety and publishes a professional journal. Fellows are selected based on their significant administrative, educational, and scientific contributions to the profession of health physics, according to the HPS Web site.

Voss is a contributor to many publications, one of which colleagues consider the most important book for radiation monitoring, called the Los Alamos Radiation Monitoring Handbook. The handbook has been distributed worldwide from nearly 10,000 copies.

Voss helped develop and deploy the critical flow venturi approach to provide a more reliable and cost-effective method of regulating the flow rates of alpha continuous air monitors.

Voss also worked on a team effort to deploy technical adaptations to the Proton Recoil Scintillator Los Alamos or PRESCILA instrument that uses a lightweight detector meant for weakly penetrating alpha rays to detect more highly penetrating neutron radiation.

"Instead of seeing things as problems, I see them as opportunities," Voss said at the ceremony. "That change in perspective has changed my life."

Six receive Career Development Mentoring awards

Six Laboratory employees received Career Development Mentoring awards from the Women's Diversity Working Group. The award recognizes informal and formal mentoring of women at the Lab.

Kim Edlund of Space and Remote Sensing (ISR-2), **Robin Gurule** of Space Science and Applications (ISR-1), **J. Paul Hale** of Program Cost and Scheduling (CS-PCS), **Cheryl Kuske** of Molecular Microbiology and Immunology (B-1), **Cindy Lovato-Farmer** of Employment Law and Benefits (LC-ELB), and **Thomas Proffen** of the Lujan Center (LANSCE-LC) were honored at a ceremony in September.

Edlund, who was nominated by **Rachel Hixson** of ISR-2, described being a mentor, saying, "This experience was rewarding on a technical, personal, and professional level.

Rachel's technical expertise, positive attitude, and hard work added major value to our projects. Personally, I was honored that I could help guide Rachel's decision-making process about her professional future." Edlund added, "Professionally, this experience has helped reaffirm my commitment to pursue leadership and mentoring opportunities."

Sheila Brandt of High Power Electrodynamics (ISR-6) nominated Gurule. She wrote: "Robin has high expectations of people, but is kind and gentle in her delivery. She is supportive while not engendering dependence."

Gurule said, "I could not be a successful mentor without a capable, hardworking, and dedicated mentee. I am honored to receive this award, and feel that the honor really goes to both of us."

Sandra Lucero of CS-PCS, Hale's mentee, said, "Although he is busy, Paul always is readily available to help. He does not criticize; instead he emphasizes process improvement, which reinforces self-esteem and builds confidence."

"I was prompted to nominate Cheryl because she exemplifies a woman who has succeeded in her career, but still makes time for her family," **Jamie Snyder** of B-1, said of Kuske. "As a woman who is pursuing a career in science, I have wondered if I would have time for family and work, but Cheryl is a prime example of how one can have both," Snyder added.

Lovato-Farmer, who was nominated by **Kristina Lindquist** of LC-ELB, said, "I always have welcomed the opportunity to mentor students and new attorneys, because I have been fortunate to have had great mentors throughout my education and legal career. I deeply appreciate what my mentors did for me, and it makes me want to do the same for others. I am continually inspired by and impressed with the students and new attorneys I have mentored."

Proffen was nominated for a mentoring award by a team of Lab employees. "Thomas knows when to take people under his wing and when to let them fly on their own and find their way," said **Anna Llobet** of LANSCE-LC, a co-worker of Proffen. She added, "Thomas transforms the work environment into a friendly and cooperative place where I feel valuable as a person and as a scientist. I believe that if the scientific world had more people with Thomas' qualities, more women would continue their careers in science, feel valuable at work, and take higher responsibility jobs."

The award promotes the career development of women at the Lab. In order to receive this award, the honoree must be nominated by his or her mentee or colleague. A selection committee made up of WDWG members evaluates the nominations by awarding points in several categories, said **Leisa Davenhall** of Chemical Sciences and Engineering (C-CSE), chair of the WDWG.

The awards also are supported by the Office of Equal Opportunity and Diversity (HR-OEOD).

In Memoriam

R. Lee Aamodt

Laboratory retiree R. Lee Aamodt died September 4 at the age of 89.

Aamodt served in the U.S. Navy during World War II and was employed by the Lab in 1951 in the former Field Test Division (J -DO). At the time of his retirement in 1982, he worked in the former Earth and Space Sciences (ESS) Division.

Aamodt received his bachelor's degree from the University of Utah and his doctorate from the University of California, Berkeley.

Aamodt is survived by his wife, Barbara, a brother Melvin, five children, eight grandchildren, and four great-grandchildren.



October service anniversaries

35 years

Thomas Kwan, X-1-PTA
Ramiro Pereyra, MST-16

30 years

Deborah Herrera, IRM-RMMSO
Thomas Houston, ASM-MM
Robert Jones, WT-8
Joseph Lowery, OS-PT
Janet Martinez, MCFO-DO
Carolyn Mills, X-DO
Donald Nye, MST-6
Margaret Reeves, OCI-OFF
John Sarracino, X-1-TA
Florence Serna, ASM-PUR

25 years

Paul Baca Jr., CTN-4
Barbara Blind, AOT-ABS
Jared Dreicer, PADSTE
Walter Griego, PMT-2
Gordon Jio, WS-WA
Mark Rivera, MSS-TA55FO
Louis Rosocha, P-24
Steven Valone, MST-8
Peggy Sue Volz, WT-8

20 years

Kent Abney, PMT-2
Pete Encinias, LANSCE-LC
Rex Hjelm Jr., LANSCE-LC
Robert Jenkins, CTN-4
Deniece Korzekwa, MST-6
Stephen Lee, CCS-DO
Barbara Maydew, EES-DO
Roberta Mulford, PMT-4
Peter Olivas, AOT-IC
David Reagor, MPA-STC
Barbara Sanchez, ASM-PM
Peter Veverka, IHS-OS
Stanley Zygmunt Jr., PMT-4

15 years

Alonso Castro, P-21
Susan Catherwood, OCI-OFF

William Chroninger, CMR-OPS
Virginia Cline, PADOPS
Karen Deaguero, N-1
James Johnson, CFO-DO
Michael Kuchinsky,
IRM-RMMSO
Ning Li, MPA-10
Sandra Lucero, CS-PCS
Minnie Martinez, PMT-4
Melissa Miller, SPO-OEEI
Edward Rodriguez, WT-DO

10 years

Francis Alexander, CCS-3
Joanna Casson, C-PCS
Bani Chatterjee, CFO-4
Melissa Chavez, RP-2
Everett Espinoza, LFO-OPS
Franz Freibert, MST-16
Michael Fugate, CCS-6
Thomas Hale, ISR-2
Neil Henson, T-12
Richard Kapernick, D-5
David Lawrence, NN
Paul Leslie, WT-7
Georgette Maestas, CFO-2
Jacquelyn Mondragon, ISR-2
Jonathan Rau, MPA-MC
Ray Roybal, WT-8
Daniel Tartakovsky, T-7

5 years

Arlene Alvarez, CS-PCS
Derek Barnes, P-21
Ringo Beaumont, AET-6
Charles Brown, AET-2
Jane Burward-Hoy, ISR-1
Stephanie Cabantous, B-2
Desiree Coriz, N-1
Timothy Dugan, N-2
Daniel Duran, IST-ESCE
Curtis Emms, PMT-4
Nina Epperson, HR-SCIENG
Quinn Fatherley, W-9

Ivo Furno, P-24
Marisa Gallegos, CTN-3
James Garcia, PMT-4
Marcos Garcia, CTN-2
Ernest Geros, AOT-ABS
Sandrasegaram
Gnanakaran, T-10
Manuel Gonzales, CTN-3
Sarah Hooks, D-DO
Anita Jaramillo, CTN-3
Christopher Jeffery, ISR-2
Gregory Johnson, CCS-3
Jane Lataille, ER-FP
Sabine Lauer, B-2
Daniel Livescu, CCS-2
Christine Maestas, CFO-2
Jessica Manzanares, CT-NHH
Kenneth Martinez, CTN-3
Thomas Morrison, EWMO-RLW
Paul Nedrow, P-23
Thomas Nelson, IRM-DC
Kristy Nowak-Lovato, C-PCS
Anthony Padilla Jr., CTN-3
John Pantano, HR-CS
Elena Phillips, DE-9
Paul Putelli, MST-16
Sanjay Reddy, T-16
I. Gary Resnick, B-DO
Tracy Salazar, W-DO
Carla Sandoval, CT-NHH
Larry Schultz, P-25
Charles Sherrill, HPC-3
James Sicilian, CCS-2
Tiffany Strub, IAT-1
Xianzhu Tang, T-15
Caroline Trujillo, STBPO-PO
Andres Valdez, C-AAC
Levi Valdez, IAT-2
Kelley Vansyoc, AET-6
Joel Vigil, N-2
Mario Vigil, AET-3
Michael Vigil, SB-RS
Tina Vigil, SAQ-DO
Robert Winkel, IHS-OS



This month in history ...

October

1793 — The Queen of France, Marie Antoinette, is found guilty of treason and executed by guillotine in Paris.

1890 — Yosemite National Park is established.

1896 — Dow Jones begins reporting an average price of certain industrial stocks.

1923 — The U.S. Senate begins investigating the Teapot Dome scandals.

1934 — Enrico Fermi discovers the principle of neutron moderation and the enhanced capture of slow neutrons.

1942 — Gen. Leslie Groves asks J. Robert Oppenheimer to head Project Y, the proposed central laboratory for weapons physics and design.

1944 — Gen. Douglas MacArthur "returns" to the Philippine Islands.

1945 — President Harry S. Truman announces that the atomic bomb secret was shared with Britain and Canada.

1949 — The People's Republic of China is created.

1952 — Britain tests its first atomic bomb on an island off the coast of Australia.

1963 — The Limited Test Ban Treaty prohibiting atmospheric testing is signed by the United States, Soviet Union, and United Kingdom.

1964 — Lab Director Norris Bradbury receives the Achievement Award from the New Mexico Academy of Science, given to recognize outstanding work by a person engaged in scientific activity in the state.

1968 — Apollo 7 is launched.

1972 — Vice President Spiro Agnew resigns and pleads no contest to tax evasion charges.

1981 — The Otowi Cafeteria opens in Technical Area 3, replacing the old cafeteria at SM-100.

1982 — The Tritium Systems Test Assembly at TA-21 is dedicated.

1986 — The Weapons Neutron Research Facility is designated a national facility for neutron scattering.

1993 — Congress votes to terminate the Superconducting Super Collider then under construction in Texas.

1994 — In Florida, Vice President Al Gore dedicates the National High Magnetic Field Laboratory, in which the Lab has a major research role.

2002 — Former President Jimmy Carter wins the Nobel Peace Prize.

And this from the October 1946 Los Alamos Times: The name "Hilltoppers" as used by The Los Alamos Times, refers to the Los Alamos High School football team. High school partisans insist upon calling the team the "Atomic Bombers." For the sake of clarity and originality, The Times will continue to call the high school gridders the "Hilltoppers."

The information in this column comes from several sources including the online History Channel, the Newsbulletin and its predecessors, the atomic archive.com, Echo Vitural Center, Science & Technology, Real History Archives, and Carey Sublette, "Chronology for the Origin of Atomic Weapons" from www.childreofthemanhattanproject.org/MP_Misc/atomic_timeline_1.htm.

Submissions are welcome. Please be sure to include your source.



Fall colors

A Rocky Mountain ash tree is awash in color on North Mesa in this photo taken earlier this month. Cooler weather has hastened the change in the color of leaves throughout Los Alamos and Northern New Mexico. Photo by Presley Salaz, Records Management and Media Services and Operations



Employee skips daily run — saves hawk

“ It was an honor and a privilege to have the opportunity to do something for nature. ”



Mark Wingard of Departmental Computing 1 prepares to release a young red-tailed hawk in Los Alamos Canyon. Wingard found the hawk earlier this year in Technical Area 3 with an injured wing. Photos courtesy of Wingard

by Krista D. Wilde

Mark Wingard of Departmental Computing 1 (CTN-1) decided to skip his daily run and eat lunch outside his building at Technical Area 3 one morning earlier this year. It proved to be a life-saving decision for a young red-tailed hawk.

“When I went into the woods, I saw a big bird jump over a rock and go into the canyon,” Wingard said. “It was very strange to see such a large bird on the ground, so I went to investigate.” Wingard discovered an injured red-tailed hawk unable to fly.

“When I saw it couldn’t fly, I thought it wouldn’t survive and I couldn’t just leave the bird there to die,” said Wingard, who found the bird near Building 30 at TA-3 in a wooded area that is home to many types of wildlife.

Wingard returned to his office and called David Keller of Ecology and Air Quality (ENV-EAQ) for help. Keller suggested that they enlist the help of the Santa Fe Raptor Center.

Three volunteers came to Los Alamos to rescue the bird. The bird was examined by a veterinarian who concluded that it was a juvenile male. Male hawks at this age usually weigh 1,100 grams,

but this bird only weighed 600 grams. It appeared that the hawk had been in the area for weeks and was unable to find food or water.

The veterinarian postulated that the bird was hit by a car and bruised its wing. However, because the bird was so malnourished, the wing was unable to heal.

If Wingard had not decided to skip his run, the hawk probably would not have survived the night, because the next night was the coldest of the winter up to that time.

The bird was rehabilitated over the next three months in Albuquerque. While in Albuquerque, the bird was taken to a flight cage to practice hunting. Gradually, the bird gained weight and healed.

This spring, Wingard and others from the Santa Fe Raptor Center met in Los Alamos Canyon to release the bird. David Keller banded the hawk’s leg with a U.S. Fish and Wildlife band and Wingard was able to release the bird that he helped save.

“It’s difficult to describe what it was like to hold this big bird in my hands and then let it go,” Wingard said, as he thought back to that day. “I remember being struck by the power and delicacy of the hawk. Its legs were very soft, but just

below were huge, powerful claws.”

“It was an honor and a privilege to have the opportunity to do something for nature,” said Wingard. “Humans depend on nature for many things, so this was a special opportunity to repay Mother Nature.

“This was the highlight of my year because it was so unusual. I have an affinity for raptors and soaring birds because they represent wildness and freedom,” Wingard said. “If an opportunity to help another bird arises, I will definitely help,” he added.

Keller said that if a Lab employee sees an injured bird or other animal they should call ENV-EAQ at 7-9141 or KSL pest control at 7-6111. Ecology and Air Quality should be called if the situation involves capturing a live, large bird. He suggested that employees try to keep birds safe while waiting for professionals to arrive. Sometimes throwing a jacket or blanket over the bird will help immobilize it so it will not get hurt.

Both Wingard and Keller emphasized the importance of involving professionals in the rescue process.

“Every bird we can save is good for people and the critters themselves,” said Keller.