

NewsLetter

Week of March 26, 2007

Vol. 8, No. 7



Sound waves turn natural gas into liquid

by Hildi T. Kelsey

Some 3.3 trillion cubic feet of natural gas — enough to meet the needs of France and Germany for a year — annually is burned or released wastefully into the atmosphere, according to a United States Government Accountability Office study.

With the help of a thermoacoustic natural gas liquefaction technology developed by Greg Swift of

Condensed Matter and Thermal Physics (MPA-10) and his colleagues, the Denver-based company Swift LNG aims to turn that gas into a usable liquid fuel.

“Using this wasted or dormant clean energy resource will address environmental concerns and help solve the world’s energy problems,” said Swift, who owns no interest in the company that bears his name.

The thermoacoustic natural gas liquefier converts heat into sound waves and then converts the hot sound-wave energy to cold refrigeration using highly pressurized helium contained in a network of welded steel pipes. First, the system combusts a small fraction of the natural gas to heat one end of the steel pipe network. Then, the resulting acoustic energy refrigerates the opposite end of the network, which cools the rest of the natural gas. At minus 160 degrees Celsius the natural gas liquefies — rendered dense enough for economical transport. This technology

requires no moving parts, contributing to its economy of operation.

The relatively small size of the thermoacoustic natural gas liquefier also will contribute to its efficiency in isolated or undeveloped areas. This feature is especially effective since the GAO study points out that some 5,000 trillion cubic feet of undeveloped and unused natural gas deposits exist around the world in well fields that are too expensive to develop due to their size or location.

“Today, capturing natural gas requires costly ultracold natural-gas liquefiers the size of oil refineries,” said Swift. “But our thermoacoustic liquefier should be economical at a smaller size, useful for remote corners of the world where smaller gas fields are available. I’m especially eager to capture the associated gas that often comes out of the ground as a byproduct of oil production.”

Swift LNG plans to have the commercial thermoacoustic liquefaction system ready for use by 2010.

 **NewsLetter**

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Allergy relief

Hay fever strikes some 10 to 30 percent of Americans, and more than half of them turn to over-the-counter medications instead of a doctor's prescription to control their symptoms.

Pharmacy aisles are crowded with dozens of allergy drugs featuring various combinations of the half dozen active ingredients approved by FDA for allergy relief.

Brands that contain antihistamines, either chlorpheniramine or diphenhydramine, are effective for runny noses, sneezing, and itching, but may cause drowsiness. Antihistamines may affect one's ability to drive or use machinery even if it doesn't cause sleepiness. There are, however, some prescription and over the counter antihistamines that are less sedating.

Antihistamines work on a runny nose, but not as well on a stuffy one, so many brands combine an antihistamine with a decongestant (for example, pseudoephedrine). Decongestants also can be found in fast-acting nasal sprays, but these may have a rebound effect, and after about three days may make the nose even more congested. One nasal spray that doesn't cause a rebound effect is Nasalcrom (cromolyn sodium). This drug helps prevent symptoms if started a few days before the allergy season begins and taken continuously. It causes few side effects and doesn't cause drowsiness.

Remember, it's the active ingredient that is important, and many products contain more than one. Read the labels to make sure you're not combining drugs with the same ingredients. Look at the ingredients in the drug product and choose the type of ingredient that will best treat your symptoms.

Source: U.S. Food and Drug Administration



Editor's note: The following is from a March 21 all-employee memo from Laboratory Director Michael Anastasio concerning the Compensation Program Design project.

Compensation Program Design Project

The Laboratory is initiating [the Compensation Program Design] Project to simplify the current job classification and salary structure.

The project is grounded in the following principles:

- Provide employees a fair and consistent single salary progression framework aligned to the external market while ensuring internal equity;
- Provide employees with visible career paths upward and laterally across job families;
- Provide a compensation program that supports effective recruitment and retention of top talent;
- Provide job descriptions with emphasis on scope and clear roles and responsibilities; and
- Provide an underlying compensation structure that supports the processes for managing and rewarding performance.

This initiative is in its initial stages and will not impact the fiscal year 2007 performance and salary management process. Additionally, it will not cause a reduction in current salaries. It will be introduced in fiscal year 2008 and will address the changes in the market, the increased competition for recruiting highly skilled staff, and the salary compression issues within pay ranges. As described in the Master Management memorandum (see below) from Ben Glover, Human Resources (HR) Division leader, the initiative will be implemented in two phases.

While this initiative will be led by the HR Compensation Group it will be developed and implemented in close collaboration with your line management to ensure accurate data and appropriate analysis.

I have personally stressed the importance of constant communication as this initiative progresses.

Accordingly, the HR Compensation Group, led by Jessica Pasqual, is available to answer specific questions and will be providing regular updates on a Compensation Program Design Project Web page located at <http://int.lanl.gov/orgs/hr/comp/cpd/index.shtml> online.

Memo from HR Leader Ben Glover

At [the March 19] all-managers meeting, I discussed the start of the Compensation Program Design Project. The goal of this program is to provide a fair and consistent single salary progression framework aligned to external market while insuring internal equity.

Through this program, the Laboratory will be able to better maintain a competitive and market-based compensation program that ensures our ability to attract and retain top talent. Additionally, this will provide employees with visible career paths both upwardly through their area of work and laterally across different jobs within the Laboratory.

The CPD Project will be conducted in two phases:

- Phase One includes an analysis of all current AS, GS, OS, SSM, TEC, and non-R&D TSM (operational and technical support) positions. This phase is scheduled to be complete with implementation of a single compensation structure for these positions by October 2007. (Note: Non-R&D TSMs are employees not directly responsible for researching and developing sciencerelated products and processes. Typical non-R&D functions are related to facility management, maintenance engineering, and a variety of technical support activities.)

- Phase Two includes the analysis of all current R&D TSM positions. Phase Two is scheduled to begin in early 2008 and be completed by the middle of the calendar year. With the completion of Phase Two, the Laboratory will have a unified job classification and compensation structure.

The project will not affect the fiscal year 2007 performance and salary management process.

The following are the key elements of this project as highlighted in Monday's meeting:

- The HR compensation staff will work with division and group level managers to insure the jobs represented in their scope of responsibility are appropriately defined.

- The CPD Project will include documentation of jobs and a comparison of their "value," or salary range, to NNSA-endorsed external salary surveys. These surveys will allow the Laboratory to compare our jobs directly to those in other organizations on the basis of job content and compensation levels.

- The CPD Project will enable us to better address changes in the market, increased competition for highly skilled staff, and salary compression issues within pay ranges. Historically, the Laboratory has performed benchmark studies as part of the Compensation Increase Plan (CIP), which is submitted annually to NNSA and drives the annual increase authorization. Comparisons to outside laboratories and corporations will help the Laboratory maintain salaries competitive enough to attract and maintain top talent.

- Results will be documented and used to create new job descriptions. While titles may change, current roles and responsibilities being performed by employees will not change as a result of this process.

- All positions will be assigned to an appropriate salary range within the new salary structure, which will be implemented throughout the Laboratory. Although the CPD Project will create a new salary structure and in some cases current salaries may be above the newly defined range, current salaries for individual employees will not be reduced.

This memorandum, its attachments, and an FAQ document are [provided] to managers [as] additional information. The HR Compensation Group also will be available to answer specific questions that you may have.



Los Alamos National Laboratory 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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Supercomputer satellite successfully in orbit

Cibola Flight Experiment launches on Atlas-5 rocket

by Nancy Ambrosiano

A small-but-smart satellite experiment, the Cibola Flight Experiment developed at the Laboratory for the Department of Energy's National Nuclear Security Administration, launched at 10:10 p.m. EST March 8 aboard a United Launch Alliance Atlas-5 rocket and was successfully placed in orbit 350 miles above Earth. The satellite will test leading-edge technologies that will be incorporated into future generations of satellites to monitor the globe for nuclear detonations.

Cibola is one of six experimental satellites that rode aboard the U.S. Department of Defense's Space Test Program-1 mission and was the fifth satellite to separate from the main unit, 62 minutes after launch, over Australia.

Said project leader Diane Roussel-Dupre of Space Data Systems (ISR-3), "It looks like the CFE mission is off to a great success. This type of success can be realized only by the dedication of a quality team. I am honored to have been a part of this team ... We all already can be proud to have been contributors."

The Cibola satellite is flying eight new technologies for space-flight validation, including a supercomputer equipped with field-programmable gate arrays (FPGAs), a new power supply, inflatable antennas, deployable booms, new type of launch vehicle separation system, and a high-density Lithium-Ion battery pack. Cibola will validate the space use of the Xilinx commercial, off-the-shelf FPGAs originally intended for use on the ground.

As with the previous Los Alamos ALEXIS and FORTE satellite missions,

Cibola will utilize a specialized ground tracking station located at Los Alamos, and all satellite operations and data analysis will be conducted from the site. CFESat is a technology pathfinder mission for the NNSA's Office of Research and Development (NA-22).

The satellite will operate with an orbital inclination that will allow observation of land areas as far north as the central United States and as far south as the tip of Africa. Now that it is in orbit, the spacecraft has successfully deployed all four solar panels, providing 110 watts of orbit-averaged power, then it deployed two long, inflatable booms and three payload antennas: one on the Earth-facing deck and one each on the two previously deployed booms.

The Cibola payload system has a science mission to study lightning, ionospheric disturbances, and other sources of radio frequency atmospheric noise. In addition, Cibola will explore the behavior of the ionosphere and its effect on communications. The Cibola Flight Experiment will help develop scientists' understanding of ionospheric weather, along with developing a predictive capability in determining the effects on communications and other space operations.

Surrey Satellite Technology Ltd. of England built the small host satellite body, CFESat, in 27 months using heritage satellite designs from the Surrey's disaster monitoring constellation and TopSat mission. In order to fit into the allowed launch volume for this unique, multi-satellite mission, the satellite body measures a mere 24 by 24 by 38 inches and weighs 350 pounds.



The Cibola Flight Experiment satellite developed at the Laboratory successfully launches aboard a United Launch Alliance Atlas-5 rocket. Photo courtesy of United Launch Alliance



MDA-C drilling complete

Crews completed drilling of four boreholes between waste pits at Material Disposal Area-C in February as part of requirements under a Consent Order with the New Mexico Environment Department. Data from the four boreholes will be added to data from 36 other boreholes and other information contained within an MDA-C Investigation Report that was submitted to the NMED in December. Because of the nature of wastes disposed at the site and the lack of clearly recognizable boundaries between waste disposal pits at MDA-C, the Laboratory developed a rigorous safety plan to protect workers and the environment during drilling of the final four holes. Data from the boreholes and the Investigation Report will help the Laboratory and the Environment Department determine final closure options for the MDA-C site. MDA-C, located north of Pajarito Road near Technical Area 50, intermittently operated as the Laboratory's second waste disposal area from 1947 to 1974 and received radioactive and chemical wastes. Photo by Adelina Martinez, Environmental Remediation Support Services



Lonesome mesa

Quiet successes a foundation of Technical Area-21 Closure Project



by James E. Rickman

Situated at the least-populated edge of Los Alamos National Laboratory's 36-square-miles of facilities, Technical Area 21 these days is nearly invisible — appearing like a fading phantom of World War II to the eyes of commuters passing Los Alamos Airport.

Despite its low-key appearance, however, TA-21, located on DP Mesa at the eastern edge of town, has been the epicenter of a huge and so far largely successful environmental-remediation and facility-closure project. During the past nine months, the TA-21 Closure Project has sampled several of the Laboratory's oldest and most mysterious dump sites, vacated DP Mesa of all non-Closure-Project personnel, and set the stage for what likely will be one of the Laboratory's more challenging, interesting, and anticipated cleanup projects at Material Disposal Area B.

Cleanup of MDA-B, located on the south side of DP Road and across from numerous businesses, is scheduled to begin this summer. The dumpsite, which operated from 1945 to 1948, is likely as full of folklore as it is with wastes from the Laboratory's first weapons-development activities. Some say MDA-B

became the final parking place for the vehicle that transported the plutonium trigger to White Sands, New Mexico, for the momentous Trinity Test. Others swear the dump contains the one-foot stainless steel containment vessel Enrico Fermi used for his famous "Water Boiler" reactor. Still others recall exotic glassware and other atomic curios being buried in MDA-B.

But MDA-B is no archaeological dig; the disposal pits were the repository of volatile chemicals and radioactive materials. The question: how much?

"Decommissioning activities require some unique skills, and one of those skills is being a sleuth," said Bill Criswell, TA-21 Closure Project deputy director. "There were no waste profiles or other documentation for MDA-B at the time it was being used, so our people went through TA-21 process records to see what was going on out at TA-21 in those days, and what the culture was at the time."

Members of the TA-21 team pored over stacks of records in the Laboratory archives and met with long-retired "old timers" hoping to learn how much plutonium and other materials were buried in MDA-B.

"Turns out, based on historic documents and interviews, plutonium was

such a precious and rare commodity that there was an extremely intense effort to recover and save it; we concluded very little was thrown away," said Criswell.

Throughout the 1940s, plutonium sludge, any solution containing plutonium, and liquids used to wash glassware that handled plutonium ended up in two subsurface 50,000 gallon tanks — known as "the General's Tanks" after Manhattan Project Army General Leslie Groves — in Material Disposal Area A at TA-21.

While plutonium recovery practices at the time could help simplify cleanup of MDA-B somewhat, the General's Tanks provided the TA-21 Closure Project with a different challenge: determining whether the massive 10-foot-diameter, 30-foot-long tanks had leaked.

Last fall TA-21 Closure Project personnel safely drilled a series of angled boreholes below the General's Tanks to collect samples. The work was a requirement under the New Mexico Environment Department's Consent Order, which serves as the Laboratory's guide to cleanup. Samples taken from the holes indicated that the tanks hadn't leaked, and TA-21 Closure Project personnel delivered the Consent-Order-required MDA-A initial investigation report to the NMED on schedule.

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‘We have a lot of facilities and disposal areas out here right now, but that’s all going to change. That’s going to please a lot of people, so we’re happy to be doing what we’re doing.’

To date, the TA-21 Closure Project has had a good track record of meeting Consent Order Requirements, among them:

- An initial investigation report on Material Disposal Area-T, which includes plutonium-tainted absorption beds and 62 shafts where a cement paste containing plutonium, americium, and uranium were disposed.
- Completion of cleanup field activities that began under former Laboratory management of Material Disposal Area-V, which received wastewater discharged from a former radioactive laundry facility that operated from 1945 to 1961.

“The Laboratory is committed to compliance with the NMED Consent Order, so crews at TA-21 have worked safely and diligently for the past nine months to meet our deadlines,” said Allan Chaloupka, TA-21 Closure Project director.

But the state Environment Department

isn’t the only entity interested in what is happening out at TA-21. DP Mesa contains land that potentially could be transferred to Los Alamos County for economic development or other purposes. Because of the county’s interest, and MDA-B’s proximity to a planned commercial development, the Laboratory’s goal is to clean the former dump site to residential standards. The Laboratory has nearly completed selection of a subcontractor to perform the cleanup, which is scheduled to be completed by 2010.

Meantime, the Closure Project continues its mission to make TA-21 the loneliest part of the Laboratory. Work is underway to remove all utilities from the site.

“We have a lot of facilities and disposal areas out here right now,” says Chaloupka, “but that’s all going to change. That’s going to please a lot of people, so we’re happy to be doing what we’re doing.”

In the photo at left, a crew at Technical Area 21 uses an auger to drill an angled borehole underneath “the General’s Tanks” at Material Disposal Area A. The tanks date back to the 1940s and were used to collect all manner of plutonium waste. The angled boreholes, which allowed TA-21 Closure Project personnel to determine whether the tanks had leaked, were required under the New Mexico Environment Department’s Consent Order.

Above center, a pore-gas sampler helps characterize the subsurface environment at TA-21. Several areas on DP Mesa, such as this one, register traces of volatile organic compounds.

Above, crews use a hose to apply a wet, sticky mixture of seeds and mulch to a hillside at TA-21 as a restorative measure after removal of old infrastructure from the site. The “hydroseed” will sprout and provide a natural plant covering to the hillside that will reduce the potential for erosion at the site.

Auger drilling and pore gas sampler photos by Bruce Wedgeworth, of Remedy Solutions; hydroseeding photo by M.J. Keys of Remedy Solutions; and TA-21 aerial photo by Richard Robinson of Records Management/Media Services and Operations

So...what do you think?

Q: The Laboratory recently introduced a new electronic vehicle to help eliminate the steady stream of all-employee e-mail that employees receive most days, while still keeping employees current on important information. LINKS, the Laboratory's new daily information brief, goes out to employees each morning through e-mail distribution. Have you been reading Links each day? If so, what do you think about it? If not, why not?



Suzanne Frary of the Service Center (HR-SVCTR)

I definitely read it every day. It helps me to find the important communications for the day. It is like one stop shopping for Lab information. Oftentimes

I get more information than I would otherwise.



Thomas Plunkett of the Office of Counter Intelligence (OCI)

I haven't read them due to the large amount of e-mail I get each day. It hasn't made my priority list yet, but I plan to take

a look at it.



Dwight Herrera of the Office of Equal Opportunity and Diversity (HR-OEOD)

Yeah, I have been reading it every day. I like the fact that it combines important news articles along with current event

items on a daily basis.



Idalia Chacon of High Performance Computing Systems (HPC-3)

Yes, I have been reading them every day and I even save them. It lets me know what is going on. I like it because with all the links everything is right there. I also really like the safety tips, security information, policies, and briefs.



Gary Hirokawa of Network Engineering (CTN-5)

Yeah, I read Links everyday, although there still is some duplication. What I do like is the fact that the stories are well edited, and there is not as much duplication or errors. One thing I would like to see is "Links Live" where the Lab's leadership gets out and meets with staff. It would be nice to have an associate director or the director go to an organization's meeting or just do a walk around and meet the staff.

PEOPLE



Former Lab director heads center at Stanford



Sig Hecker

Director Emeritus and former Laboratory Director, **Sig Hecker**, was named co-director of Stanford's Center for International Security and Cooperation.

Hecker's "decades-long dedication to improving global security make him an extraordinary

choice to help direct CISAC in the years ahead," said Coit Blacker, director of the Freeman Spogli Institute for International Studies at Stanford University.

The Center for International Security and Cooperation, which is headed by a scientist and a social scientist, was founded in 1983. It draws on information from a variety of disciplines to address current problems in international security.

Hecker has worked at CISAC since fall 2005 as a visiting professor and has contributed to international projects to prevent the spread of nuclear weapons and materials for making nuclear weapons. "I look forward to the new challenge of leading CISAC with Scott Sagin, as well as teaching and research in management science and engineering," said Hecker.

"Stanford University is extremely fortunate to be able to have a scholar-practitioner of Sig Hecker's nature coming to CISAC to help guide our multidisciplinary efforts to address the tough security challenges facing the world right now," said co-director of CISAC, Scott Sagin.

Hecker was Los Alamos' fifth director, leading the Laboratory from 1986 to 1997. He led the Lab's Materials Science and Technology (MST) Division and Center for Materials Science before becoming director.

During his time at the Lab, he worked

with Russian nuclear laboratories to secure and safeguard the former Soviet Union's stockpile.

Hecker earned his bachelor's, master's, and doctoral degrees in metallurgy from Case Western Reserve University. He received the American Nuclear Society's Seaborg Medal, the Alumni Association Gold Medal, and the Undergraduate Distinguished Alumni Award from Case Western Reserve University.

He is a member of the National Academy of Engineering, the Russian Academy of Sciences, and a fellow of the American Academy of Arts and Sciences.

Lab's Runde named to DOE isotope post



Wolfgang Runde

Wolfgang Runde

has been selected to help manage the Department of Energy's National Isotope Program. Runde, an internationally recognized isotope and actinide scientist with program management experience, was most recently the leader of a team of scientists and

technicians engaged in actinide science and isotope production at the Laboratory.

"The Department of Energy's National Isotope Program is at the forefront of the development and production of isotopes that serve vital roles in medicine, homeland security and industry," said Terry Wallace, principal associate director for science, technology and engineering. "Runde has made outstanding contributions at Los Alamos in isotope and actinide research, and I am pleased that he can now help guide the national program."

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In Memoriam

Thomas I. Jones

Laboratory retiree Thomas I. Jones died June 20, 2006, at his home in Denver. He was 82.

Jones came to Los Alamos in 1951 as a research assistant in the former Chemistry and Metallurgy Research (CMR) Division. He worked at Los Alamos 36 years, retiring in 1987. He returned to the Lab for three years as an associate in the Materials Science and Technology (MST) Division. He also worked in the former Chemistry-Metallurgy Baker (CMB) Division.

Jones was a World War II veteran serving in the U.S. Army Air Corp. He earned a bachelor's degree in metallurgy/chemistry from the Colorado School of Mines.

Survivors include his wife, Barbara; daughters Nancy Strain and Shari Jaramillo; eight grandchildren and 10-great-grandchildren; and other family members.

Norris George Nereson

Norris George Nereson, a Laboratory retiree and Manhattan Project nuclear physicist died on February 21 at the age of 88.

Nereson worked on Project Y from 1943 until 1946 and began working for the Physics Division (P-5) in 1947. He was working in the former Applied Photochemistry (AP) Division when he retired in February 1982.

Nereson is survived by his wife, Joan; sons David and Kenneth; daughter Christine; and four grandchildren.

Emily Willbanks

Laboratory retiree Emily Willbanks died February 18. She was 76.

Willbanks joined the Laboratory in 1954 as a research assistant in the Theoretical (T) Division. At the time of her retirement in 1990, she was a staff member in the Computing and Communications (C) Division.

She received a bachelor's degree in physics from Duke University and a master's degree in physics from the University of New Mexico.



March service anniversaries

40 years

Jerry Davis, AOT-RFE

35 years

Pedro Aragon, HX-3
John Archuleta, EES-2
Manuel Jaramillo, MST-6
Gregory Kubas, C-IIAC
Stephen Quintana, MST-6
Anthony Sgro, X-1-PTA
Elmer Torres, CGA-GAO

30 years

Robert Albers, T-11
Debra Archuleta, ENV-EAQ
James Clifford, CTN-5
Laura Liles, CFO-2
Louis Montoya, PF-DO
Carole Oldenborg, DIR
Jack Shlachter, P-DO
B. Clarence Torres, IRM-RMMSO

25 years

Walter Atencio, ADESHQ
Gerald Leeches, PF-DS
Schon Levy, EES-6
Susan Padilla, IAT-3
Richard Robinson, IRM-RMMSO
Laverne Rodriguez, IAT-1

20 years

Gregory Valentine, EES-6
Keith Woloshun, AOT-MDE

15 years

Claudine Armenta, C-CSE
Brian Aubert, WT-1
Cynthia Bustos, STBPO-PRM
Don Dale, IAT-1
Leslie Duncan, AOT-IC
Malcolm Ennis, RP-2
Lawrence Goen, PADWP
Angelina Gonzales, ASM-AO
Christine Gonzales, CFO-3
Derek Gordon, SB-DO
Robin Gurule, ISR-1

Timothy Haarmann, B-1
Kevin Hale, W-10
Hans Hartse, EES-11
Daniel Kathios, PMT-2
Dale Leschnitzer, IST-OCIO
Rhonda Mcinroy, C-PCS
Gregg Mckinney, X-3-MCC
Leroy Padilla, ASM-PM
Karen Paige, ERSS-GS
Sylvia Romero, ASM-DO
Judi-Anne Romero, CFO-2
Guy Sandusky, CFO-TRVL
William Smith, PMT-4
Raymond Tell, SB-AS
Robert Tirey, POL-DO
Kirk Weisbrod, AET-5

10 years

Sheila Brandt, ISR-6
K. Nolan Carter, P-24
Janet Danis, PMT-2
Randy Flores, MQ-2
Joseph Gonzales, ER-ISO
Scott Greenfield, C-ADI
Gary Grim, P-23
Alice Gutierrez, CFO-PRBEN
Adolfy Hoisie, CCS-1
Cindy Maze, CFO-3
Sheila Melton, N-2
Edward Orler, MST-7
Matthew Porter, MQ-2
Georgia Sanchez, EES-DO
John Sarrao, MPA-DO
Roberta Shaw, WT-2
Lorraine Stanford, IAT-2
Robin Stothard, ADWE
Karen Trujillo, MQ-2
Roger Wiens, ISR-1
Sandra Wilson, SAFE-MCAS4
Piotr Zelenay, MPA-11

5 years

Rebekkah Aguilar, RP-1
Adrian Akinci, W-6
Charles Blankenship, ENV-EAQ
James Brooks, IAT-1
E. Diann Bruhn, HX-3

Steven Clarke, W-6
James Coy, ADESHQ
Mark Galassi, ISR-1
Mary Garcia, EWMO-RLW
Leroy Gutierrez, PF-TDI
Jeff Heath, CS-PCS-2
Lisa Henne, ENV-EAQ
Yenling Ho, IST-APPS1
Jeffrey Inman, HPC-1
William Junor, ISR-2
Jeffrey Knapp, W-10
Josef Koller, ISR-1
Gregory Long, PMT-1
Fred Lopez, WS-FWS
Timothy Lopez, PMT-2
Christopher Lovato, RP-1
James Lucero, AET-6
Senaída Martinez, OCI-OFF
Carl Martinez, W-8
Steven Mccready, WT-2
Terri Moore, CT-ESCE
Brett Nadler, WT-4
Heather Nordquist, N-1
Jose Palomares, WS-TWPS
Thomas Plunkett, OCI-OFF
Alfredo Reyes, ES-DE
Thomas Rivas, CFO-2
Lisa Robinson, EWMO-OS
Sandra Rodriguez, PF-DO
Rueben Roybal, W-7
Debra Saiz, EES-IGPP
Mark Salazar, ASM-PM
Kenneth Salazar, WS-FWS
Tanya Salazar, PMT-2
Rachel Sanchez, RP-1
Lori Saunders, QA-IA
Derek Schmidt, MST-7
Chad Sjostrand, MSS-TRPM
Peter Smith, AET-6
Natalie Smith, RP-1
Wendy Staples, EWMO-WMC
Martyn Swinhoe, N-1
Jose Valdez, PMT-2
Felice Valdez, PMT-2
Lawrence Vigil, PMT-2
Armando Vigil, RP-1
Sandra West, RP-1

Lab's Runde ...

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Runde received a doctorate in chemistry from the Technical University of Munich, Germany and was a postdoctoral fellow in the Seaborg Institute at Lawrence Livermore National Laboratory before joining the Lab as a staff member in 1996.

He will be responsible for coordinating and integrating DOE's isotope production sites, isotope availability (both research and commercial), facility infrastructure, and technology development.

"I am very excited about this opportunity, and I am honored to be selected. I look forward to working with DOE, the program's scientific director, production sites and customers to provide a reliable supply of high-quality commercial and research radioisotopes," Runde said.

Three recognized for refrigerant program

Steve Story, Kathleen Gorman-Bates, and Sabrina Sanchez, all of Ecology and Air Quality (ENV-EAQ), recently were honored with an Essential Systems and Services (ESS) for Environmental, Health, and Safety (EH&S) and Crisis Management Excellence Award.

The three Lab employees were honored for their Clean Air Act Title VI Refrigerant Program, which works to ensure compliance with the act by using Compliance Suite Refrigerant Compliance Management Software. This software is used to calculate leak rates and maintenance history for more than 1,300 appliances throughout the Laboratory. The software helps the Lab build a complete history of service records, refrigerant consumption, and leakage rates, explained Gorman-Bates.

The award is given by ESS, a company whose software the Lab uses, to recognize those who are committed to using information management to find solutions related to EH&S regulatory compliance and potential crisis events. The ESS honored Story, Gorman-Bates, and Sanchez in October 2006.

Story received his bachelor's degree in mechanical engineering and his master's in astronautical engineering before he began working at the Lab in 1994.

Gorman-Bates earned her bachelor's degree in biology from St. Mary's in Kansas, started working at the Lab in 1989, and began work on the Title VI compliance program in 2001.

Sanchez earned associate of applied science accounting and associate of arts business administration degrees from Northern New Mexico College. She began working on the Title VI compliance program in 2005.



This month in history ...

March

1791 — The United States Mint is created by the U.S. Congress.

1806 — Lewis and Clark reach the Pacific coast.

1841 — William Henry Harrison delivers the longest presidential inauguration speech, 8,443 words.

1864 — About 2,400 Navajos begin the "Long Walk" to Bosque Redondo near Fort Sumner in east central New Mexico.

1870 — The 15th Amendment goes into effect, giving black men the right to vote.

1902 — Tochangri, Turkey, is completely destroyed by an earthquake.

1914 — The first successful blood transfusion is performed.

1915 — The national Advisory Committee for Aeronautics, the forerunner of NASA, is created with an annual budget of \$5,000.

1926 — Robert Goddard launches the first rocket powered by liquid fuel.

1937 — The first license plates for the purpose of identifying registered vehicles are issued by the state of Connecticut.

1937 — The United States sets up its first central blood bank.

1943 — Construction of the chemistry and physics laboratories, the post exchange, and six barracks and 42 apartments is completed on "The Hill."

1946 — Norris Bradbury, director of the Los Alamos Laboratory, receives the Legion of Merit from the President for the part he played in the development of the atomic bomb.

1950 — University of California, Berkeley researchers announce the creation of element 98, which they name "Californium."

1954 — The first rocket-driven sled on rails is tested at Alamogordo in southern New Mexico.

1961 — Newly elected President John F. Kennedy issues an executive order establishing the Peace Corps.

1967 — Former Deputy Director Robert Thorn, T-2 group leader at the time, receives the E.O. Lawrence Award.

1974 — The American spacecraft Mariner 10 takes the first close-up photographs of Mercury.

1977 — The first Cray-1 supercomputer is shipped to Los Alamos.

1981 — President Ronald Reagan is shot and wounded by John W. Hinckley Jr.

1986 — Georgia O'Keeffe, the artist who gained worldwide fame for her austere minimalist paintings of the American southwest, dies in Santa Fe at the age of 98.

1995 — Astronaut Norman Thagard becomes the first American astronaut to ride to space on-board a Russian launch vehicle.

1997 — Trial of a lawsuit filed in response to the 1995 reduction in force at the Lab begins in Albuquerque.

1999 — The first shipment of waste leaves the Laboratory for the WIPP site in southeastern New Mexico.

2005 — Manhattan Pioneer and Nobel Laureate Hans Bethe dies at the age of 98.

1947 — And this from the March 1947 Los Alamos Times: Prices at the Hill's Commissary include large peanut butter at 26 cents a jar; cut beets, 7 cents a can; salmon, 31 cents; marshmallows, 6 cents per package; No. 2 cans of orange juice, 8 cents; 250-count paper napkins, 10 cents; and garlic salt, 9 cents.

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.



S-T-E-M! We can do all of them!

Expanding Your Horizons Conference opens world of science to young girls

by Krista D. Wilde

S-T-E-M! We can do all of them! More than one hundred eighth to tenth grade girls from around Northern New Mexico chanted this cheer during the Expanding Your Horizons Conference at the University of New Mexico, Los Alamos.

STEM stands for science, technology, engineering, and mathematics, and the cheer was designed as an icebreaker — a way to remind girls that they are able to contribute to these fields.

“You’re here to learn how much fun it is to work in STEM fields,” said Aviva Sussman of Geophysics (EES-11), EYH coordinator.

During the daylong conference, each girl participated in two workshops and listened to a keynote talk by a woman physicist. The girls also participated in a team-building exercise that required them to create a glider out of paper and paperclips. Captain Kate Smits of the United States Air Force Academy, who led the exercise, discussed teamwork and science with the girls; the teams then built their gliders and competed to see whose glider could hit a target several feet away. The first-place team won because they placed the paperclip in the center of their glider, making it more stable.

After the team exercise, girls attended one of fifteen science workshops with hands-on activities. This year’s workshops included “Chemistry in the Kitchen,” “Let’s Make Ooey, Goopy Polymers,” “Digging up the Past and Building the Future,” “The Talking Skull,” “Tails of a Veterinarian,” and “Designing Patterns Using Programming Logic and Mobile Robots.”

Hannah Davis, an eighth grader at Innesence School in Pojoaque looked forward to participating in Expanding Your Horizons. “Science is my favorite subject, because it’s fun and very hands-on. I like the experiments,” said Davis, adding, “I’m not sure what kind of career I want, so I thought this would be a great place to find out.”

One eighth-grader traveled from Locust Grove, Oklahoma, to participate in EYH. “I thought it’d be a good experience,” said Bailey Stipes.

“I think this will be really good for her. We don’t get this kind of thing in the town we live in,” said her mother, Tina Stipes.

An EYH “success story” also played out at this year’s conference. Maxine Casados, an engineering student at Northern New Mexico College, attended Expanding Your Horizons in 1999. “When I came to the convention, I met women in the science fields. It really opened up the fields to me and motivated me.”

Casados recently was invited to attend a Delegation on Engineering conference in China in May and Los Alamos Women in Science presented her with a check for \$1,000 in support of this trip.

“Young ladies like you are the leaders of tomorrow,” Casados told the participants as she accepted the check.

Karen Daniels, a physicist from North Carolina State University addressed the girls about “Playing with Sand: How to have Fun and be a Scientist.” She described her research on the behavior of granular materials. It is difficult to predict this behavior, she explained, because granular materials are not wholly liquid or wholly solid. She discussed how scientists use mathematical models, computer models, and experiments to answer questions.

Daniels also recounted a recent trip to Rio de Janeiro for a Women in Physics conference. “We wished all the girls in all our countries knew how much fun it is to be a scientist,” Daniels said.

Holly Teeter of Intellectual Property (LC-IP), a first-time presenter, said it’s important to reach out to young girls. “I think it’s important to get high school girls involved in science. When I was in high school, I was able to participate in an event like this, and it was really great to learn what you can do with a background in science,” she said.

Kim Thomas of the Science and Technology Base Program Office (STBPO-PO) and a sponsor of the event said, “As a country, we are falling behind in the scientific fields — in part — because we are missing out on the talent of half of our population. This event is aimed at making sure we take advantage of all our available talent.

“This is not just a women’s issue, it’s something that benefits the whole Laboratory and the whole country.”



From left to right, Alyson Ulibarri, Kinsey Spude, and Kristy Vigil listen to Pilar Cannizaro of the New Mexico Department of Cultural Affairs during the “Digging up the Past and Building the Future” workshop. The workshop was part of the Expanding Your Horizons Conference, sponsored by the Los Alamos Women in Science organization with the help of several Laboratory associate directorates.



Alexine Lopez, left, and Gina Visarraga, participate in a robotics workshop during Expanding Your Horizons. The daylong conference consisted of workshops and a keynote talk by Karen Daniels, a physicist from North Carolina State University.



Megan Nystrom, left, and Melissa Martinez practice their suturing skills during the “Tails of a Veterinarian” workshop. More than one hundred eighth to tenth grade girls from around Northern New Mexico, including one student from Oklahoma, participated in the Expanding Your Horizons Conference. Photos by Sandra Valdez, Records Management/Media Services and Operations