

Newsletter

Week of July 31, 2006

Vol. 7, No. 16



Protection Technology Los Alamos using lead-free bullets for training

by Erika L. Martinez

Protection Technology Los Alamos is using lead-free bullets to reduce the amount of lead being put into the ground during training sessions.

"We've been using the bullets since the first day of 2006," said Range Master Stephen Rivera of PTLA.

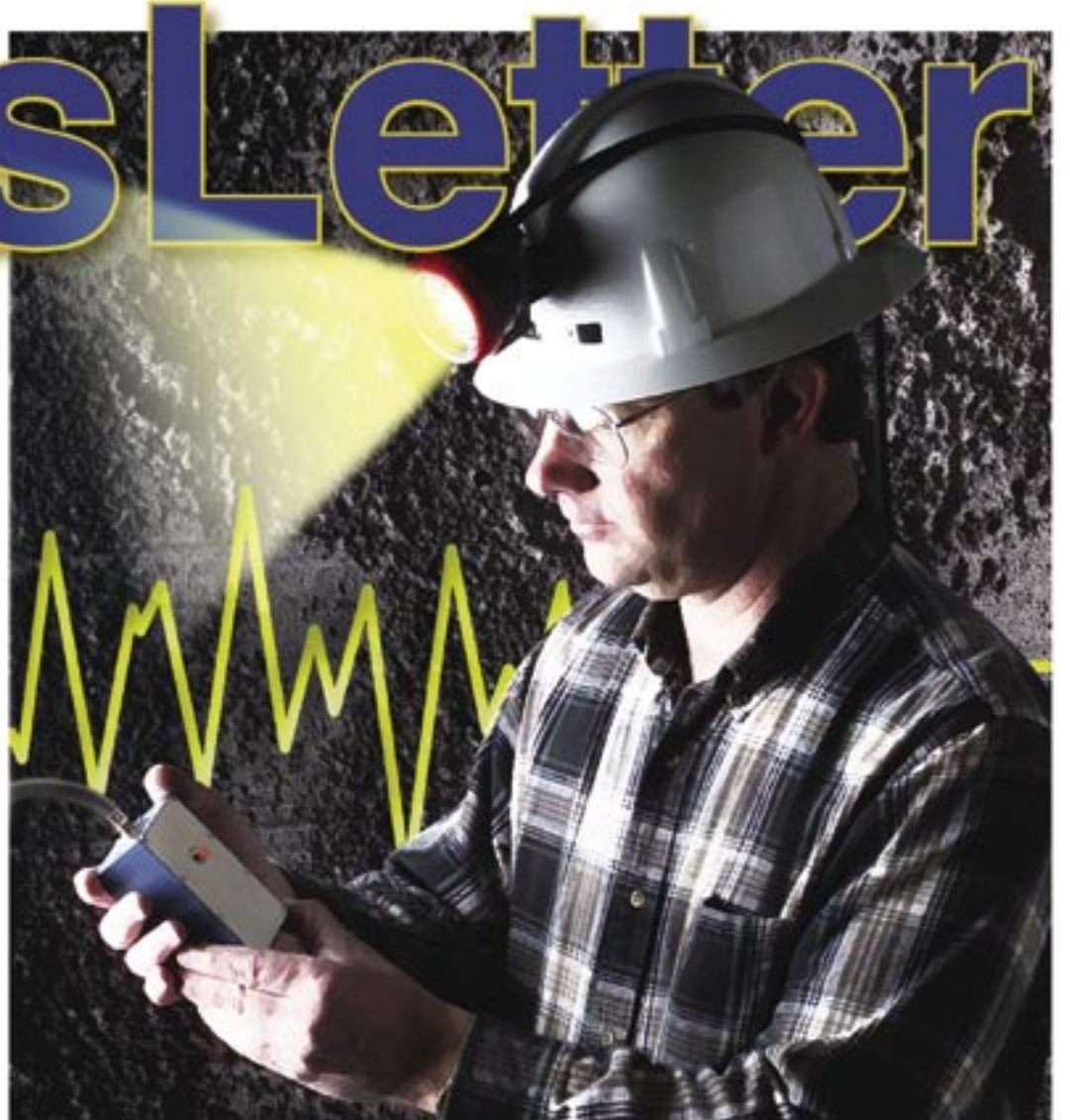
Since the September 11, 2001, attacks, 200 additional protective force officers have been hired, with another 100 expected to be hired next year. Because of the added personnel, more training is being done. Therefore, more rounds are being fired, which elevates lead emissions, Rivera explained.

"We can usually stay under the number of rounds that the Department of Energy requires, but with more security police officers being hired, we went over the limit. Therefore, we decided to adopt the use of lead-free bullets (to reduce lead emissions)," Rivera said.

The lead-free bullets have been beneficial to PTLA. According to Rivera, cleaning materials for guns are no longer considered hazardous because of reduced lead accumulation; the bullets produce nonhazardous waste when cleaning out bullet traps; and their impact on steel targets doesn't disperse chunks of lead in the air.

The lead-free bullets are used for the shooting team, glock transition training, firearms practice, and normal maintenance training.

Protection Technology Los Alamos is the Laboratory's protective force subcontractor.



Underground Radio™ revolutionizes subterranean emergency rescue capabilities

by Hildi T. Kelsey

Trapped deep underground, buried beneath a pile of debris and rubble, bewildered captives are literally "left in the dark" as rescue crews work feverishly to free them. Without a reliable method of communication, both the ensnared individuals and their rescuers are filled with uncertainty — and dread of the unknown.

This type of scenario has played out several times in the last decade in mining accidents, natural disasters and other crisis situations around the world. With the introduction of new technology developed by a team from the Laboratory led by David Reagor of the Superconductivity Technology Center (MPA-STC), obstacles imposed by lack of two-way communication during such catastrophes may soon be a thing of the past.

Reagor's team developed Underground Radio™, a technology that will provide Through-The-Earth Communication™ (two-way voice and text) for first responders, rescue and security teams, underground miners, and the public in critical emergency situations.

Underground Radio uses very low frequency (VLF) electromagnetic radiation and digital audio compression technology to carry voice and text data. The VLF signals also can transmit tracking and location data for radio users if they are unable to respond.

"This is a technical solution to the problem of voice communication in underground areas. It is also inexpensive to build," said Reagor.

Given global concerns about terrorist attacks such as 9/11, the London subway bombings, natural disasters such as Hurricane Katrina, and underground incidents, such as the recent Sago mining tragedy in West Virginia, there is a growing need for more reliable technology to provide through-the-earth communication, especially for those trapped underground.

Underground Radio is a through-the-earth communications mechanism that offers high-level security to critical government, industrial, military, commercial, and public infrastructure. It can be used to respond to threats of terrorism and natural disasters such as hurricanes, earthquakes, and fires. Underground Radio also provides two-way voice reception that can be used to alert miners of underground conditions during blasts, fires or collapses, or to locate trapped miners. The technology offers convenient, portable underground communication and a data link to robotic machines.

Recently, Vital Alert Technologies Inc., a U.S.-based corporation, signed two exclusive license agreements with the Laboratory to commercialize the technology for use by emergency rescue crews in urban centers and by the mining industry.

"The new technology is a breakthrough in digital and wireless communications," said Joe Miller, president and CEO of Vital Alert. "As a pre- and post-emergency

continued on Page 2


NewsLetter

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New safety program raises awareness

Laboratory employees can find timely, concise topics to help stay safe at work and at home in a new Safety Short program.

"The Laboratory's first Safety Short — Human Numbers — describes the Total Recordable Case monthly rate in human terms. It also shows how many of us are injured, develop illnesses, or receive first aid as a result of our work," said Theresa Cull, Industrial Hygiene and Protection Division (IHP) leader.

The Web-based Safety Short program provides fliers, videos, and other tools, which are available at <http://int.lanl.gov/safety/safetyshort> online.

"In addition, a Manager's Toolkit helps managers present each Safety Short during organizational safety meetings, tailgate meetings, and Nested Safety and Security meetings," Cull said. "Managers are encouraged to use this as part of a new 'Safety Share' agenda item, during which people have an opportunity to share a safety experience or lesson learned." The Manager's Toolkit is available at <http://int.lanl.gov/safety/safetyshort/#managers> online.

For questions or suggestions regarding the Safety Short content, Manager's Toolkit, or future topics, contact Robin Nicholas of IHP at safetyshort@lanl.gov by e-mail.

Care for each other. Work safely.

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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Editor's note: Laboratory Director Mike Anastasio recently issued the following all-employee memo concerning the fiscal year 2007 budget.

FY07 Indirect Budget Call

Each year, the Laboratory goes through a budget development exercise with CFO guidance setting forth indirect budget targets and establishing a review process. [Recently] I issued this year's guidance to Laboratory senior managers, which will culminate in an fiscal year 2007 budget.

This is the next step on our institutional commitment to finding efficiencies in how we manage this Laboratory. It is clear that this will raise short-term challenges in order to ensure the long-term health and viability of a great national security science laboratory.

As I have discussed at several all-hands meetings, fiscal year 2007 presents a challenging financial picture. An expected flat funding profile combined with increases in costs for items such as compensation, employee benefits, gross receipts taxes, and management fee means the incremental costs facing the Laboratory in fiscal year 2007 total roughly \$200 million. To address the increased incremental costs for fiscal year 2007, indirect budget targets will be reduced by 10 percent.

The budget call identifies certain expectations. One is that we intend to manage the current level of Los Alamos National Security, LLC, staffing through constrained hiring and by monitoring attrition. The second major expectation is that we minimize the impact to our customers by keeping our current overhead rates stable.

While line management is ultimately responsible for examining their operations and identifying funding efficiencies to meet fiscal year 2007 targets, everyone owns the success of this Laboratory. All of us need to examine how we do work and apply the Laboratory's trademark creativity to finding smarter ways to further science and accomplish our mission in a safe and secure manner.



Laboratory Director Mike Anastasio



State official briefed on Lab environment initiatives

Danny Katzman, left, of the Laboratory Water Stewardship Project (LWSP) describes the Sandia Canyon wetland project to New Mexico Environment Department Secretary Ron Curry and Tracy Hughes, NMED legal counsel, during a recent visit to the Laboratory. Also shown is Andy Phelps, right, associate director for environmental programs (ADEP). Before touring Lab projects in Sandia and Pajarito canyons, Curry and NMED officials met with Laboratory Director Mike Anastasio at University House to discuss Lab environmental priorities and initiatives. Photo by James E. Rickman

Underground Radio™ ...

continued from Page 1

warning, evacuation, and rescue communication system, it solves RF [radio frequency] radio failure problems and eliminates systems downtime complications in difficult environments, such as subways, tunnels, skyscrapers, and mines. The new technology also will greatly enhance the ability of mining companies to protect their workers."

Funding for Underground Radio came from the Department of Energy's Office of Industrial Technology and from Laboratory Directed Research and Development — a program in which a portion of the Laboratory's operating budget is used to fund outstanding, emerging or innovative science and technology.

DARHT conducts successful W76 hydrotest

by Kevin Roark

The W76 Life Extension Program (LEP) reached another major milestone in July with a successful hydrotest at the Laboratory's Dual Axis Radiographic Hydrotest (DARHT) facility. The experiment, number 3624, took place in the early evening of July 14, and involved staff from a variety of divisions in the Weapons Programs Directorate, including Weapons Technology (WT), Experimental Hydrotest (HX), and Applied Physics (X). The core personnel, as always, are aided by hundreds of scientists, engineers, technicians, and support staff from across the Laboratory.

"This is a result of the dedicated people at Los Alamos who support the weapons program through dynamic experiments, and represents what we can accomplish when we work toward a common goal with outstanding teamwork," said Charles McMillan, associate director for Weapons Physics. "This successful test is a testament to the quality of our science, the technical skills of our people, and the essential role of DARHT in stewardship."

The hydrodynamic experiment was designed to perform two essential tasks: provide an engineering certification of manufacturing design and assembly techniques in support of the W76 LEP, and harvest physics data to further inform the Laboratory's baseline predictive models — to apply the principles of Quantifying Margins and Uncertainties in the W76 LEP path forward. Hydrotest 3624 was one of a series of hydrotests in support of the W76 LEP; another is scheduled for later this year.

"The lead scientists report the quality of data as outstanding," said Paul Hommert, X Division leader. "This is very significant for

us because the experiment confirms our manufacturing hardware design and therefore our path to success on the W76 LEP. It further supports our overall stewardship program through an additional set of physics measures."

Following the DARHT experiment, conducted with the facility's first axis, key personnel reported a 100 percent data return on all instruments and without a single safety or security issue. The test also successfully employed a new fire mitigation strategy that included clearing additional grasses and woody plants near the firing site, resulting in greatly reduced fire danger. The high-explosive detonation was conducted in a containment "tent" filled with fire-fighting-type foam to capture the contaminants that sometimes may be released to the environment, greatly limiting potential exposure to hazardous materials. The DARHT facility expects to begin conducting fully-contained hydrotests inside steel vessels this year.

The lead experimentalist for the hydrotest was Steve Balzer of Hydrodynamics (HX-3). Test director was Chris Romero of Weapons Engineering Technology (WT-DO); firing site engineers were Robert Valdiviez and James Maestas of Weapons Testing Engineering (WT-7); and assembly engineer was Anita Carrasco of Experimental Device Engineering and Assembly (WT-3).

Axis One at DARHT is a powerful electron beam accelerator that produces flash X-rays, designed to make high-resolution, high-speed X-ray pictures of detonating mock-ups of imploding weapon components. Hydrodynamic experiments at DARHT and sub-critical experiments in Nevada, small-scale experiments, and computer simulations, are the three-tiers of stockpile stewardship at Los Alamos, assuring the safety and reliability of the U.S. nuclear deterrent without a return to underground testing.



Gone are the days of fireballs and smoke plumes at the DARHT facility. The latest hydrotest, 3624, seen in this sequence of images, was accomplished with limited containment inside a shroud of fire-fighting-type foam intended to keep post-shot environmental clean-up to a minimum and greatly reduce fire danger. Future hydrotests at DARHT will be fully contained inside steel vessels. Images by Kim Abdallah of Hydrodynamics (HX-3)

Pilot test of volatile organic removal from former Lab disposal site is a success

by James E. Rickman

An estimated one-fifth of a subsurface solvent-vapor plume was cleaned up by the Environmental Corrective Actions Project (EP-CAP) during the course of studying soil vapor extraction (SVE) as a potential method for cleaning up Material Disposal Area L. The site is a waste disposal area that operated from the early 1960s until 1985 at Technical Area 54.

The SVE system will be used for about a month each at two different boreholes at MDA-L, said John Hopkins of EP-CAP. Pilot



William Stewart, an environmental engineer with Apogen Technologies, gathers data from the soil-vapor-extraction apparatus that is cleaning up a subsurface solvent-vapor plume at Material Disposal Area L, a former disposal area at TA-54. Photo by James E. Rickman

test results will be used in evaluations of alternatives for final closure plans for Area L. Under the March 2005 Compliance Order on Consent — commonly known as the "Consent Order" — the Laboratory is required to close MDA-L by 2010.

Soil-vapor extraction is a widely known, commercially available technology that has been used across the world for decades to clean up volatile organic compounds (VOCs), such as spilled diesel fuel, dry-cleaning solvent and similar chemicals. The method uses a vacuum unit that is attached to a borehole sunk into the ground in the vicinity of the chemical plume. The vacuum pulls VOC vapors out of the ground and through several vessels filled with granular activated carbon, which absorbs the chemical contaminants.

Effluent air from the process is monitored to ensure that no chemicals are released to the air or environment, said Hopkins. Spent drums of activated carbon can then be disposed at an appropriate licensed chemical waste facility.

"To meet requirements of the Consent Order, the Laboratory needs data for subsurface cleanup related to Area L, which is why we're conducting the pilot," said Hopkins. "However, a secondary effect of this pilot project is contaminant removal."

To date, more than 400 pounds of VOCs have been extracted from the plume as part of the pilot project. On average, the SVE system extracts about 40 pounds of chemicals each day. Once the pilot project ends, researchers will evaluate the performance specifications of the system, which then will be included in the MDA-L final closure report, due to the New Mexico Environment Department in July 2007.

MDA-L received containerized and noncontainerized, nonradio-logical, liquid chemical waste for nearly a quarter century in three impoundment "ponds," one disposal pit, and 34 vertical shafts. Disposal was consistent with the practices of the time under the Atomic Energy Commission, and the disposal area has not been used since 1985. Legacy disposal practices at MDA-L, particularly non-containerized disposal, created a well-documented subsurface VOC plume estimated to contain up to 2,000 pounds of assorted VOCs in addition to the remaining containerized source at the site.

New Diamond-Jemez intersection as of August 7

Part of Security Perimeter Project

Laboratory employees and contractors who work in Technical Area 3 will see a new street intersection when they return to work August 7. The Diamond Drive-East Jemez Road (truck route) intersection is changing as work continues on the Security Perimeter Project.

The Security Perimeter Project will institute a major traffic re-route on the weekend of August 5-6 (weather dependent) to facilitate the next phase of construction. Traffic will be detoured from the truck route, through the East Jemez Access Control Station, and back into the Diamond Drive/Jemez Road intersection. The drawing below depicts the traffic changes that will occur. This detour is expected to last approximately six weeks, according to Mark Harris of Security Projects (PP-SEC).

There will be no change to security conditions, no badge checks, and the guard station will not be operational, he said.

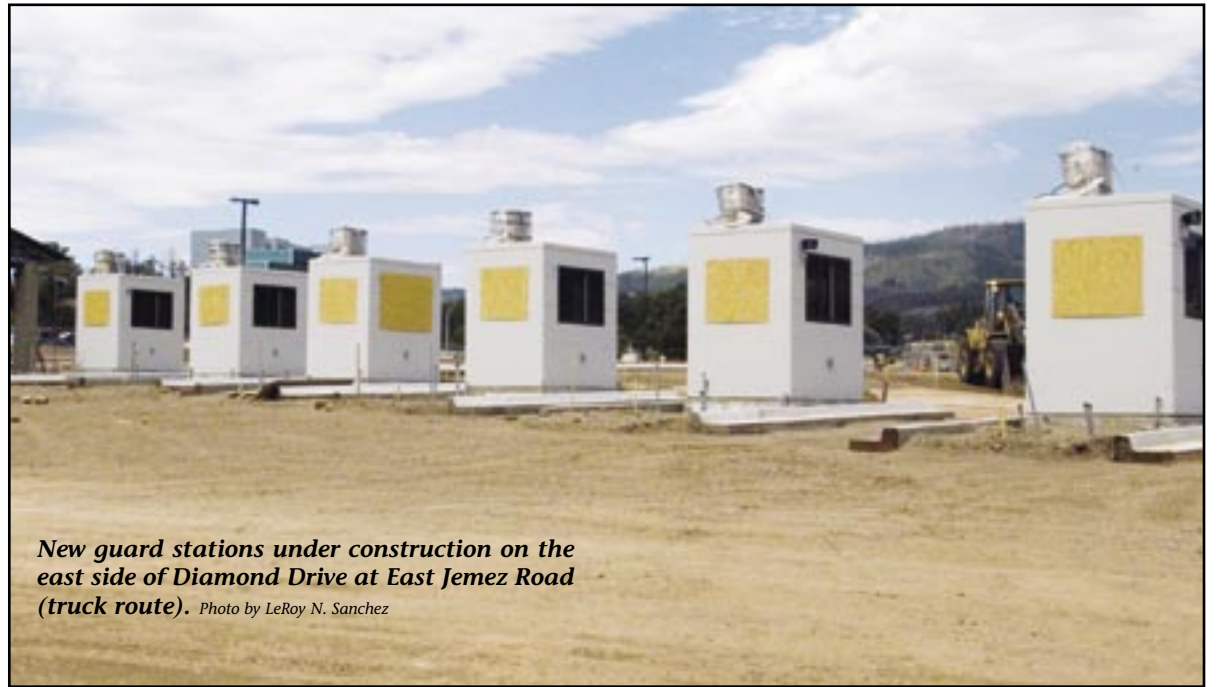
Traffic is being re-routed to allow construction of the new entrance road, new drop off and pick up area for Park and Ride commuter buses, and additional parking areas. This traffic re-route will maintain the same number of lanes that currently exist on the truck route (two west bound lanes and one east bound lane) near the Diamond

Drive/Jemez Road intersection. The traffic re-route is shown in orange on the drawing. The red outline shows the current road configuration.

Lab employees and all motorists should slow down and obey all traffic signs, posted speed limits, and signals. Motorists also should be alert for construction vehicles and equipment crossing the area as work progresses. The yellow areas shown depict the construction zones where work will occur during this phase of construction. Private vehicles, bicyclists, and pedestrians must

stay out of the construction zones at all times. Adequate shoulder room will be provided on the detour route so bicyclists can travel through this area safely.

Pedestrians also should stay off the road detour. Sidewalks are not available at this time or are being demolished along the truck route. Harris said there are adequate sidewalks along Diamond Drive for employees, and the temporary Park and Ride area will remain accessible from the existing parking lots and from Diamond Drive.



New guard stations under construction on the east side of Diamond Drive at East Jemez Road (truck route). Photo by LeRoy N. Sanchez

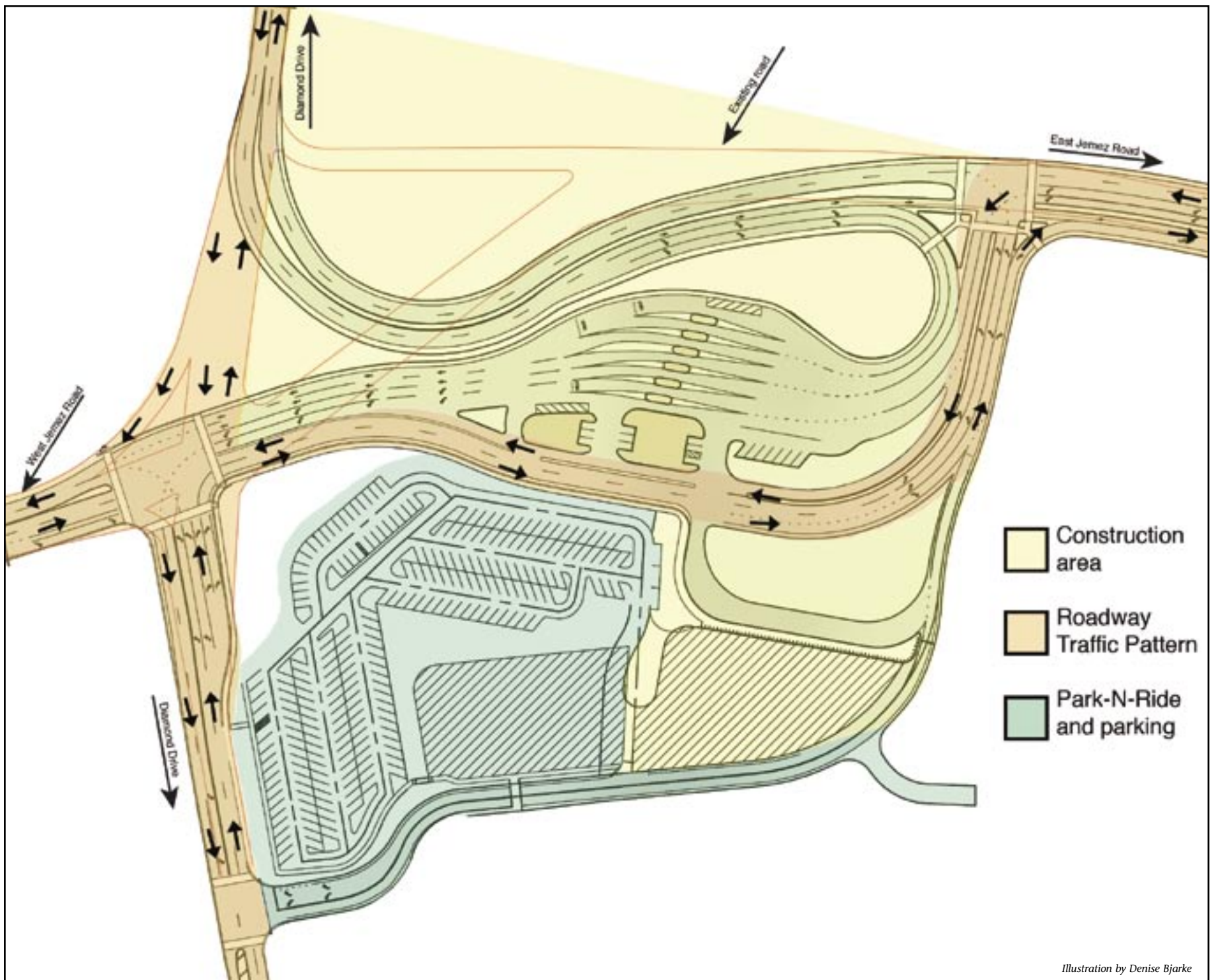


Illustration by Denise Bjarke



Children recently built rockets at a Bradbury Science Museum workshop. The children were able to make and experiment with five different kinds of rockets and learn about gravity, acceleration, payload, stability, propellants, and altimeters. William Telford, left, Micah Brown, center, and Adam Wooton work diligently on their rockets. They were given a budget with certain materials, including a rubber band and a balloon, to make a rocket. Photo at right: Andrew Li prepares his rocket for takeoff at Canyon School Park.



A summer of science at the Bradbury



Albert Titla and Byron Calabaza of San Ildefonso Pueblo study the "Turbulent Orb" exhibit during a recent visit to the Bradbury Science Museum. This exhibit was built in San Francisco to demonstrate turbulence. The orb is filled with water and liquid crystals. When the wheel is spun, the orb begins to move, but the water has inertia and resists the movement. This creates friction between the plastic ball and the water, which creates waves. This exhibit relates to concepts of complexity, chaos theory and has some applications to meteorology.



Gordon McDonough of the Bradbury Science Museum adds dry ice to his demonstration of "cooking" a comet, as local children look on in amazement. The vapor shown is created when dry ice reacts to water. The museum's annual Summer Adventures in Science program includes demonstrations and hands-on exhibits. Inset: Children check out McDonough's finished comet. Photos by Ed Kellum

Lab employees have a role in custodial safety

by Erik C. Eakins

Safety is an important consideration for all Laboratory employees, including custodians who clean offices and work areas. The Infrastructure and Site Services (ISS) Directorate needs the assistance of workers in ensuring the safety of custodians.

Custodians at times must empty trash containers that are overflowing or exceed lifting limits, often as a result of non-routine office cleanup activities, said Jerry Ethridge, ISS associate director. Employees should use additional trash containers to avoid spills and comply with weight restrictions, he said.

Custodians also occasionally find sharp objects, such as medical sharps that can penetrate the skin, and/or materials that should be recycled. Sharps, medical waste, and the like should be appropriately separated and controlled. Sharps include hypodermic needles, syringes (with and without needles), scalpels, razors, and all other contaminated sharp objects. They must be disposed in hard-sided containers labeled with the universal biohazard symbol. The filled containers should go to Medical Services (OM-MS) (formerly HSR-2) for disposal.

Non-contaminated sharps, such as broken glass or broken capillary tubes, should be placed in hard-sided containers and taped closed or tightly lidded to prevent any loss of contents, at which point they can be disposed of in trash cans, said Ethridge.

Custodians will soon begin leaving information cards at offices when custodians are unable to perform normal duties due to these situations. The cards have information on correct procedures for trash disposal and what employees must do to ensure that trash is collected safely and properly. A phone number also is included on the card.

After an information card has been left by a custodian, Lab employees must follow proper procedures for trash disposal, said Ethridge.

The Laboratory recycles white paper, aerosol cans, batteries, cardboard, magazines, toner cartridges, metals, CDs/diskettes, chemicals, computer/electronic equipment, light bulbs, metals, and toner cartridges for fax machines and printers. The Lab's recycling program Web page offers guidance on recycling.

Coffee grounds, pieces of food, and/or aquarium materials should be discarded in trash containers and not in sinks, as they often cause drains to plug and overflow, creating water/slip hazards, said Ethridge. There are signs above sinks reminding employees that sinks are for sanitary water only.

Call Salvage at 7-2111 to have reusable items, such as books, binders and desk organizers, picked-up.

All Lab employees are asked to help improve the Lab's custodial program, and more importantly, help ensure that co-workers can perform their tasks safely and effectively.

For more information, contact Dru Price of Maintenance and Site Services Division (MSS) at 7-4380.

So... what do you think?

Q: What is your preferred way of getting information at the Laboratory — all-employee messages, Daily Newsbulletin, all-hands meetings, one-on-one with line manager, etc. — and why?



Stephen McLin of Environment and Remediation Support Services (ERSS)

For general information concerning day-to-day activities at the Laboratory, I rely on the Daily Newsbulletin or interactions with fellow employees. For job-specific information, I look to the Laboratory's Research Library. In my experience, I have found it to be an excellent resource for online journal articles, ASTM standards, and numerous databases. Our library is second to none, including many collections at our finest universities.



Nicole Valerio of Records Management/Media Services and Operations (IRM-RMMSO)

I think the best way to get information is through e-mail. With everyone's busy schedules and technology being what it is, e-mail seems to be the fastest, most efficient way to communicate. It gives employees the time to concentrate on work without the constant interruptions of a phone or having to leave for a meeting. In today's world technology works best.



Pat Rice of Applied Modern Physics (P-21)

The easiest way to get information about the Lab is an all-employee e-mail message. Not only is it fast, it is capable of providing in-depth information via links.



Nick Medina of Property Management (ASM-PM)

E-mail, because I am always next to my computer and am constantly reading everything sent to me.



Marisol Pulliam of Chief Financial Officer-2 (CFO-2)

I prefer the all-employee messages. Often times what we hear from all-hands meetings is not what comes out in all-employee messages. I view the all-employee messages as the official guidance.

Correction

Elshan Akhadov of the Center for Integrated Nanotechnologies (MPA-CINT) was listed as a former Laboratory employee in the July 17 issue of the Los Alamos NewsLetter. Akhadov is a member of the ENABLE team, which won a 2006 R&D 100 Award.

PEOPLE



Atcher named vice-president of Society of Nuclear Medicine



Robert Atcher

Robert Atcher, manager of Los Alamos' health and human services programs, is the new Society of Nuclear Medicine vice president-elect for the 2006-2007 term. In this role, through the transition of officers, he will be the president-elect for the

2007-2008 term and then president the following year.

The Society of Nuclear Medicine is a multidisciplinary international scientific and professional organization of more than 16,000 members dedicated to promoting the science, technology, and practical applications of molecular imaging and nuclear medicine. Atcher was presented in the new officer slate during SNM's 53rd annual meeting in San Diego, Calif.

Atcher said he intends to assist the society in maintaining its leadership role "as the profession stands at the intersection of molecular imaging and medical practice."

A member of the Southwest Chapter, Atcher has held a number of national positions and has been a witness for SNM before various House appropriations subcommittees and a government oversight committee.

"We [SNM] are trying to make sure there is support for both isotope production and basic research for the field of nuclear medicine, which includes operations at the Isotope Production Facility, which is part of LANSCE at Los Alamos and other similar

facilities at national laboratories around the country," said Atcher.

Atcher also is professor of pharmacy in the College of Pharmacy at University of New Mexico. He has served as an associate professor of the cardiovascular disease division and as an associate professor in the radiation oncology department at the University of Alabama at Birmingham. He also was an assistant professor and research associate with the radiation oncology department at the University of Chicago. His research interests include medical uses of radionuclides for diagnosis and therapy, tumor biology and improving the transition of technology into clinical applications.

Atcher has served in several different capacities since joining the Laboratory in 1997, most recently as the group leader for two groups in the Bioscience (B) Division. He also has been a radiochemist for the Michael Reese/University of Chicago Center for Radiation Therapy; a group leader and chemist for nuclear medicine research at Argonne National Laboratory in Argonne, Ill.; an expert in the radiation oncology branch of the division of cancer treatment for the National Cancer Institute of the National Institutes of Health in Bethesda, Md.; and a research associate in radiology and nuclear medicine at Brigham and Women's Hospital and Harvard Medical School in Boston, Mass.

Atcher is a fellow of the American Institute of Chemists and a member of the American Chemical Society, the American Society of Therapeutic Radiology and Oncology, Beta Gamma Sigma Business Honorary Society, and the American Association for the Advancement of Science. He has published more than 70 peer-reviewed journal articles and has presented nearly 70 abstracts for national meetings. In addition, Atcher holds five patents and has spoken at nearly 90 invited lectures.

continued on Page 7

In Memoriam

Charles E. Manger

Charles E. Manger passed away on March 8 in Las Cruces at the age of 79.

Manger began working at the Laboratory in 1956 in the former GMX Division as an electronics technician. Manger retired in 1979 from the former Accelerator Operations and Technology (MP-8).

Manger is survived by his wife, L. Gladys; son Charles Manger Jr.; daughters Jean Manger and Frances Crampton; two grandsons and two great grandchildren.

Fred W. Schonfeld

Fred W. Schonfeld, 87 of Los Alamos, passed away on April 24. He was 87.

Schonfeld joined the Laboratory as an assistant scientist in the former Chemistry and Metallurgy Research (CMR) Division in 1947. At the time of his retirement in 1990, he was a staff member in the Nuclear Materials Technology (NMT) Division.

Schonfeld received a bachelor's degree in physical metallurgy from Washington State University and a master's degree in metallurgy from the University of Minnesota.

He is survived by his wife, Doris of Los Alamos; daughters Diana Kottmann of Los Alamos and Anna Bower of San Francisco; son Fred Schonfeld of Lebanon, Mo.; and numerous grandchildren and great grandchildren.

Milton J. Hollen

Laboratory retiree Milton J. Hollen died May 3. He was 78.

Hollen was born on June 13, 1927, in Lebanon, Mo., and served in the U.S. Army during World War II. He was awarded the American Theatre Ribbon and the World War II Victory Medal.

Hollen began working at the Laboratory in 1955 in the former GMX Division. While at the Lab, he worked in the former Controlled Thermonuclear Research (CTR) Division and the former Meson Physics (MP) Division retiring in 1990.

Hollen is survived by his wife, Rosemary; son Robert Hollen; sister Annamary Graham; brother Carl Wade; and numerous grandchildren and great grandchildren.

Atcher named ...

continued from Page 6

Atcher holds a doctorate from the University of Rochester, N.Y.; a master's in business administration from the University of New Mexico; a master's in journalism from University of Missouri; and a bachelor's degree from Washington University, St. Louis, Mo. His wife, Sharon, is a Laboratory employee in Nuclear and Radiochemistry (C-NR).

Koslowski wins Postdoctoral Publication Prize in Theoretical Physics

Marisol Koslowski, previously of Theoretical Chemistry and Molecular Physics (T-12), received the Leon Heller Postdoctoral Publication Prize in Theoretical Physics.

Her paper, "Avalanches and Scaling in Plastic Deformation," published in *Physical Review Letters* in September 2004. Richard LeSar of T-12 nominated Koslowski for the prize.



Marisol Koslowski



Hank Ashbaugh

Hank Ashbaugh, also previously of T-12, received honorable mention for his paper "Scaling-particle theory and the length scales of hydrophobicity," which published as a colloquium in the *Reviews of Modern Physics* in January 2006. Lawrence Pratt of

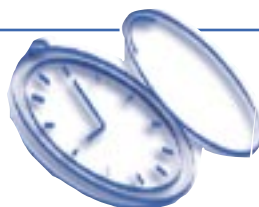
T-12 nominated Ashbaugh for the prize.

This biennial prize, jointly sponsored by the Laboratory and retired staff member Leon Heller, is awarded for the best article in theoretical physics, published or accepted for publication after January 1, 2004. The article must describe work performed primarily during the tenure of the postdoctoral appointment. Heller, who created the prize in 1976, provides the prize money. He has paid the cash award since the inception of the program.

Koslowski was a postdoc in T-12 until February 2005 when she converted to a technical staff member position. She holds an assistant professor position in the Mechanical Engineering Department at Purdue University. She received her doctoral degree in aeronautics from the California Institute of Technology in 2002.

Ashbaugh was a postdoc in T-12 until July 2004. He is an assistant professor in the Chemical Engineering Department at Tulane University. He received his doctoral degree in chemical engineering from the University of Delaware in 1998.

Koslowski and Ashbaugh will speak about their research at a Physics/Theoretical Division colloquium this fall at the Lab. At the colloquium, Koslowski will be presented with a monetary award and certificate and Ashbaugh will receive a certificate.



July service anniversaries

30 years

Daniel Archuleta, HPC-18
Raymond Depaula, MPA-STC
Matthew Hykel, N-4
Tommy Montoya, ER-ISO
Kathleen Parker, TT-DO
Daniel Rusthoi, SPO-CNP
Tommy Stup, HPC-7
Robert Valdez, PMT-WCT
Rodney Whitaker, EES-ACED

25 years

Kenneth Ault, RP-1
Karen Burkett, HR-LS
Joseph Bustos, MSS-MSE
Julio Castro, RP-1
Steven Cole, AET-3
Zora Dash, EES-HGG
Harald Dogliani, IT
Jose Duran, IRM-RMMSO
Lydia Gallegos, ADWE
Debra Graves, OS-DO
Steven Gray, IAT-3
Elaine Guenette, FIRP-PGIU
Loretta Gurule, EFO-DO
Jon Hinckley, W-1
Aaron Honey, IRM-RMMSO
Kin Lam, WT-1
Dorothy Merrigan, CTN-5
Richard Pearson, FME-DES
Relf Price III, SEC-PPS1
Ronny Snow, MST-7
Mike Ulibarri, ISR-3

20 years

Diane Baker, EES-GEO
North Carey, WT-1
Edward Derr, WS-FWS
David Harradine, C-PCS
Mary Ann Hill, MST-6
Aleene Jenkins, PP-WEP
Evelyn Maes, OCGA-GAO
Susan Martinez, CFO-2
Kevin Ott, MPA-MC
Jerome Paul, W-6
Robert Reid, AET-1
Bethany Rich, ADESHQ
Pia Romero, ASM-SUB
Evan Rose, HX-3
Robert Shea, X-4-SS
Vincent Thomas, X-2-N2
Stuart Trugman, T-11
John Wills, T-1

15 years

William Atkins, ISR-3
Glenda Bustos, PMT-PDST
Joe Durkee Jr., D-INSE
Rhonda Overbay, ADTR
Sharon Jennings, CT-NHH
Toni Mork, PMT-DO
Hugo Ojeda, MSS-IFCS
David Sigeti, X-3-PC
Cynthia Trujillo, D-EIA

10 years

Terri Abeln, W-2
John Ambrosiano, D-3
Nancy Ambrosiano, OCGA-MRO
Allen Baca, ISR-SSA
Eli Ben-Naim, T-13
Geoffrey Brown, MST-8
Luis Chacon, T-15
Tammy Dominguez, SB-DO
Anita Gallegos, ADBS
Kristin Gardner, IAT-2
Alejandro Guerrero, W-8
Matt Kirkland, X-4-TAR
Bryan Laubscher, AET-4
Michelle Lee, RP-1
Samuel Letzring, P-24
Lawrence Lucero, CAO-DS
Yvette Maes, P-22
Anthony Mancino, SPO-OEEI
Eric Martens, IAT-2
Mark Mineev, X-1-MV
Paul Moniz, PMT-PU
Carlene Naranjo, IST-BSI
Donald Quintana, W-2
Gloria Rabener, SEC-DSS9
Thomas Rising, PM-PMC
Darren Sandoval, PMT-WCT
Christopher Scully, W-11
Robert Sedillo, P-21
Brian Stafford, X-3-SVCG
Billy Taylor, MST-6
David Teter, MST-6
John Veilleux, WS-DO
Duc Ta Vo, N-4
Mark Welsh, PMT-NMM
Kip Wentz, W-2
Kevin Witherspoon, TA55-DO

5 years

Laurence Barton, EFO-DO
Amanda Bean, PMT-APC
Gordon Besson, IST-CYSEC
Stuart Bloom, AET-3
Sally Butler, OM-OMO

Brad Collins, CS-PCS
Scott Crockett, T-1
William Dai, HPC-8
William Daniel, D-4
Vanessa Dixon, IHP-OS
Debbie Duran, CTN-3
Kevin Dussart, MSS-TRPM
James Faeder, T-10
Adam Farrow, MST-16
Antoinette Fidel, IST-AUBAD
Orlando Garduno, IAT-1
Connie Gerth, ENV-RCRA
John Goorley, X-3-MCC
Margaret Hendricks, FME-WFO
David Higdon, CCS-6
Kenneth Hurtle, AET-1
Jeffrey Johnson, HX-6
Michael Lindstrom, N-1
Colleen Lopez, CT-TQ
Jerry Lopez, WS-DO
Miranda Lovato, PMT-PU
Steve Martinez, WS-DO
John Michel, ISR-3
Kelly Michel, N-4
Krystal Mondragon, C-AAC
Rachel Morse, W-DO
Will Nixon, MC-TDA
John Olson, RP-DO
Kelly Pippin, SEC-PSS5
Mark Prokop, AOT-RFE
Julie Quintana-Valdez, LANSCE-NS
Beverly Rios, IAT-1
Robert Rios, EMO-DO
Brenda Robertson, CS-PCS
Reginaldo Rocha, MPA-CINT
Bobbi Roop, C-PCS
Gary Rouleau, AOT-ABS
Willie Salazar, WS-DO
Cynthia Scism, EES-HGG
Daniel Seely, LFO-DO
Gilbert Serrano, CTN-4
Matthew Sottile, CCS-1
Christopher Stephens, CTN-1
Kelcey Tietjen, CTN-5
Marsha Trujillo, CTN-3
Missy Trujillo, WS-DO
Benjamin Uphoff, CTN-5
Joseph Valdez, WS-DO
Rudy Valdez, TA55-DO
Christopher Vigil, WS-DO
Darin Westley, P-22
Jian-Xin Zhu, T-11
Maximillian Zurek, CCS-3



This month in history ...

July

1057 — Chinese and Japanese astronomers note the supernova in the Crab Nebula.

1598 — Don Juan de Oñate reaches the confluence of the Rio Grande and Chama River, where he establishes the first Spanish capital in New Mexico.

1776 — First public reading of the Declaration of Independence.

1863 — The Battle of Gettysburg begins.

1884 — The Statue of Liberty is presented to the nation by France.

1908 — The Federal Bureau of Investigation is established.

1940 — The first betatron goes into operation in Urbana, Ill.

1943 — The first shipment of plutonium arrives at the Laboratory.

1945 — The Lab successfully tests the first atomic weapon at Trinity Site, dramatically demonstrating the effectiveness of the implosion type of bomb.

1956 — The Laboratory's Omega West Reactor begins low-power operation as a research tool for studies in nuclear physics.

1959 — The Lab's first Rover reactor, Kiwi A, has its first test run at the Nevada Test Site.

1969 — U.S. astronauts Neil Armstrong and Edwin Aldrin make the first landing on the moon.

1976 — The first pictures from the surface of Mars are received, courtesy of Viking I.

1980 — The Laboratory's branch of the Institute for Geophysics and Interplanetary Physics (IGPP) is established.

1981 — The Laboratory's University House opens with a ribbon-cutting dedication.

1989 — BEAR (Beam Experiment Aboard a Rocket) is successfully launched and tested at the White Sands Missile Range.

1991 — President Bush signs the Strategic Arms Reduction Treaty (START) to reduce nuclear weapons stockpiles to 6,000 accountable warheads.

1995 — Comet Hale-Bopp is discovered by amateur astronomers in New Mexico and Arizona.

1996 — The Laboratory halts work for safety reviews following an accident involving a student who received an electrical shock.

And this from the 1946 Los Alamos Times: The first chapter of any national organization to be set up on The Hill came into being this month when the American Society for Metals granted a charter to Los Alamos.

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.



Employee teaches others that firearm safety is easy

by Sallie Boorman

“Hunting is a privilege. It is not a right. Obey the laws, be ethical, and be safe, and we will keep the privilege.” These are the first words students hear in New Mexico Game and Fish Department’s Hunter Education class in which students learn the ethics and safety methods of handling a firearm. The state requires children under the age of 18 to attend a hunter education course in order to obtain a license and in New Mexico there are hardly enough class slots available. Lines wrap around buildings, voice mail boxes fill up within an hour and only the first 30 people are lucky enough to be accepted into the class.

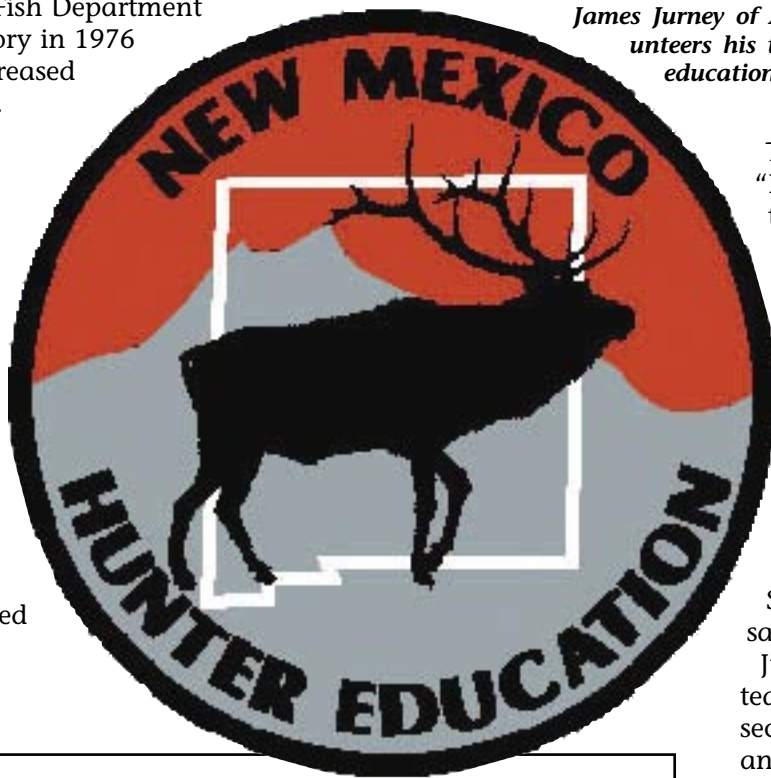
When James Journey of Applied Engineering Technologies (AET-5) couldn’t find an open class for his two sons to enroll in, he rose to the occasion and became a state certified instructor himself. Three years later, Journey continues to volunteer several weekends a year teaching hunter education classes in Los Alamos. “Safety is easy,” said Journey. “By being a part of the process of teaching respect and understanding for firearms, I get a chance to help prevent accidents and teach people some ethics.”

The course covers topics of firearms handling, ammunitions, ethics, survival, wildlife management, the history of firearms, and hunting, among others. “The goal of the class is to teach people to be safe and ethical hunters and shooters,” said Journey. Hunter Education has proved to drastically reduce the number of firearm accidents in New Mexico. According to Game and Fish Department statistics, since the class became mandatory in 1976 the number of hunting accidents has decreased dramatically statewide (see graph below).

However, it is not just youths that are taking advantage of hunter education courses; parents and adults have been filling the classes. “Learning how to safely handle a gun still is important for everyone,” says Journey. Surprisingly, the majority of students turn out to be parents with their children or those who are just learning about firearms and hunting. Guns and hunting easily can be misunderstood, and for many of Journey’s students, the class gives them a chance to understand what shooting and hunting is about. “This class is not just for young hunters, it is informative and fun for everyone, from the experienced hunter to someone who has never seen a gun,” he said.



James Journey of Applied Engineering Technologies (AET-5) volunteers his time several weekends a year teaching hunter education classes in Los Alamos. Photo and graphics courtesy of Journey



There is more to the class than just safety. “It is about learning respect for living things, for the tools you use, and learning how to conserve and manage our wildlife,” Journey said. The balance between man and nature is important to understand and instructors spend a great deal of class time covering these topics. “Most people do not know that since the Pittman-Robertson Act of 1937, the bulk of wildlife conservation programs in our country are funded by sportsmen ... It is estimated now that through this act, sportsmen contribute more than \$3 million a day to wildlife conservation,” said Journey.

Journey’s personal passion lies with teaching the ethics and hunter responsibility sections of the class. “Also, here in the state, any game that is confiscated by game wardens goes to people in need so no meat is wasted. It makes one proud to be part of this process.”

Journey is not the only volunteer instructor. Journey attributes the success of the class to the team of six other Los Alamos volunteers. “This program could not function without the rest of the teaching staff. It is the diversity of the staff that adds to the richness of a student’s experience,” he said. Journey and the Los Alamos team are so dedicated to the program that they’re receiving requests to travel to other counties in Northern New Mexico to teach the course.

Even so, the real personal satisfaction for Journey comes from knowing that by giving a couple of weekends up a year, he can save lives. “I may never see how someone’s life gets saved, and I may never hear from a student again,” Journey said. “Knowing that a student may be more safe and ethical and pass that on to others makes everything worth it.”

For more information on hunter education or upcoming classes, go to <http://www.safehunter.info> online.

