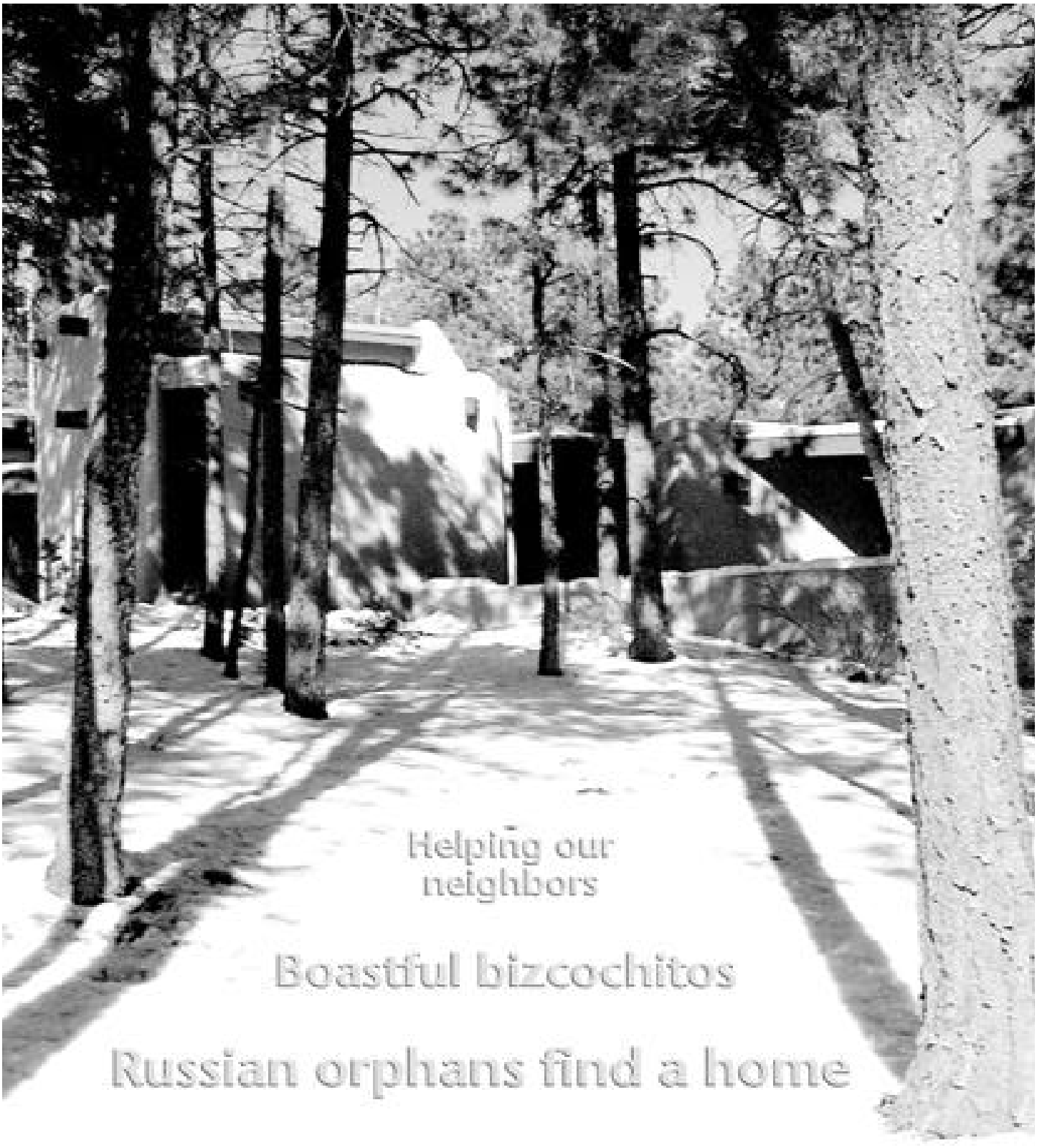
Reflections

Los Alamos National Laboratory Vol. 1, No. 2 • December 1996



Helping our neighbors

Boastful bizcochitos

Russian orphans find a home

Inside this issue ...

Cover by Fred Rick

Reflections

Reflections, the Laboratory monthly publication for employees and retirees, is published by Public Information (PA-1). The staff is located at TA-3, Building 100, and can be reached by e-mail at *newsbulletin@lanl.gov*, by telephone at 7-6103, by fax at 5-5552, or by regular Lab mail at Mail Stop C318. The individual telephone numbers are listed below.

Editor:
Jacqueline Paris-Chitanvis, 5-7779

Production coordinator:
Denise Bjarke, 7-6103

Graphic designer:
Edwin Vigil, 5-9205

Photographer:
Fred Rick, 5-9202

Staff writers:
Steve Sandoval, 5-9206
Ternel Martinez, 5-7778

Editorial coordinator:
John A. Webster, 7-5543

Los Alamos National Laboratory is an Affirmative Action/Equal Opportunity employer. It is operated by the University of California for the U.S. Department of Energy.

editor's journal

It's not what you say ...

"It's not what you say, it's how you say it."

This expression, one of my maternal grandmother's favorites, has been running through my mind lately. A soft-spoken woman, my grandmother put up with a lot from her grandchildren — chattering nonstop around the dinner table, running through her flowers, climbing on the sagging stone wall in her front yard. But one thing she wouldn't tolerate was rude behavior, and few things were ruder to her than someone using an unnecessarily harsh tone, even if he or she was making a valid point.

I vividly recall an incident with my youngest sister years ago while we were visiting my grandmother. Sandy was learning to crochet, and being a 13-year-old know it all, I felt compelled to tell her she wasn't doing it right — which meant she wasn't doing it the way I would have done it. I was in the middle of vigorously pointing out her mistakes, when my grandmother walked in and ordered me to leave the room. When I later asked her why she got angry with me just for trying to help, she cupped my face in her hands, looked me straight in the eyes and said, "How many times have I told you. It's not what you say, it's how you say it."

I'm not sure I got the full meaning of what she was saying at the time, but over the years, I've come to understand very well the lesson she was trying to impart. You can have all the best of intentions and have some really valid points, but if you don't treat people with respect when making your points, you might as well keep your thoughts to yourself, because most of us don't readily take advice or comments when they're offered rudely.

As editor of the daily "Newsbulletin" and "Reflections," I interact with a lot of people throughout the Lab, in all job series and at all levels, and one thing many of us have noticed recently is that some Lab folks aren't always as polite or respectful of others as they could be. I won't begin to speculate on why this is. But I do know you can complain or comment about unclear policies, changes in benefits, early dismissal procedures, mail delivery, library materials, road closures, long meetings, parking space or what have you without taking pot shots or being verbally abusive.

Since Public Information (PA-1) ceased publishing the weekly Newsbulletin and introduced the daily electronic format, I've had a barrage of comments from Lab employees over the phone, in person and through e-mail. The vast majority of these comments have been constructive and offered in a well-meaning, professional manner. We appreciate this feedback and want it to continue, as it helps us make improvements and a better product. However, the way some individuals have chosen to express themselves ... well, let's just say they brought my grandmother's words screaming to mind.

It's just a thought, but maybe all of us could benefit from reflecting on how we communicate with others. If we're not getting our point across or the response we want, maybe it's because we're going about it all wrong. Which brings to mind another of my grandmother's sayings (she had a million of them), "You catch more flies with honey than vinegar."

The heat's on ...

by John A. Webster

A heat-measuring program that has tracked the Department of Energy's nuclear materials for more than 30 years is now located at the Laboratory.

The calorimetry program started at the Mound Facility in Miamisburg, Ohio, in the early 1960s. With the closing of Mound, the program moved to Los Alamos. A 1,000-square-foot calorimetry lab at TA-35 officially opened for business at the beginning of this fiscal year.

"We were at it for a long time at Mound and got to be the experts," said Jerry Wetzel, an electronics engineer who worked in the program at Mound and who is now a member of the Los Alamos Calorimetry Team. "We even became 'referees' to settle discrepancies."

The heart of the program is a relatively simple, but extremely sensitive, device called an isothermal radiometric calorimeter, which measures heat output. Since radioactive elements such as tritium and plutonium generate heat as they decay, the mass of an amount of radioactive material can be determined accurately by measuring its heat output.

"You have to know the exact percentages of the different radioactive isotopes in a sample," Wetzel said. "But it's very accurate, it's safe since you don't have to open up containers, and it's faster than destructive analysis techniques."

The accuracy and safety of calorimetry have made it a primary element in DOE's nuclear materials accountability program. Calorimeters developed at Mound are used at nearly a dozen DOE facilities to monitor plutonium and tritium supplies.

"You have to make sure you haven't lost any nuclear material," said Norbert Ensslin of Safeguards Science and Technology (NIS-5), co-leader of the project at Los Alamos, "and you have to know that nothing has been stolen or diverted."

Jerry Wetzel of Safeguards Science and Technology (NIS-5) demonstrates one of the calorimeters housed in the new calorimetry lab at TA-35. A sensor measures the heat output of samples placed inside the aluminum container held by Wetzel. This reading, combined with measurements of the percentage of each radioactive isotope in the sample, allows the mass of the radioactive material to be determined very accurately. Inset: This prototype calorimeter with a solid-state heat sensor was developed at Mound and will be tested and evaluated at Los Alamos. The prototype is potentially smaller, faster and more transportable than other calorimeters.
Photos by Gary Warren of Photo, Video, Digital Imaging (CIC-9)

The fact that calorimetric measurements do not require the opening of containers and the removal of part of a sample for destructive analysis is one reason why the program has been shifted to Los Alamos, Ensslin said.

"We are the lead laboratory for other nondestructive analysis techniques involving neutron and gamma-ray measurements," he said. "The calorimetry program complements these activities."

The new program also fits well with the Laboratory's current work in stockpile stewardship and nonproliferation. For instance, said Mike Christian of the Nuclear Materials and Stockpile Management (NMSM) Program Office, it will complement work in such areas as stockpile refurbishment, nuclear materials safeguards and disposition, and warhead dismantlement. This relationship will provide opportunities for fruitful research into these areas as well.

Calorimeters come in lots of shapes and styles, depending on the need. Most components of a typical instrument are made commercially, but the sensing units were fabricated at Mound and will now be made at the Laboratory.

The Los Alamos program will continue the main thrusts of the Mound program, including establishing heat calibration standards for use throughout the DOE complex. A small separate laboratory with fine-tuned temperature and moisture controls has been set up for the calibration activities.

Training of specialists in calorimetric assay techniques and calorimeter operation also will continue, along with testing and evaluation of operational software and support to DOE facilities that use calorimeters.

The Calorimetry Team, led by Ensslin and Teresa Cremers of Nuclear Materials Management and Control (NMT-4), is using several calorimeters that came from Mound, and it recently began design work on a new calorimeter that will be used by the Los Alamos-based ARIES (Advanced Recovery and Integrated Extraction System) Project. The first Calorimetric Assay Training Course is scheduled for next July.

Wetzel, who is working at the Laboratory on a two-year limited term assignment to assist during the transition period, has been working in the calorimetry program for 22 years.

"I'm probably the only person that knows how some of them work since I built them," he said. "So as soon as I can teach every one here what I know, I can go back to being retired."

Complying with RCRA ...

This report was submitted by Hazardous and Solid Waste (ESH-19). If your organization wishes to submit an item, please call us.

In 1995, the Laboratory initiated a comprehensive program designed to improve hazardous waste management and achieve 100 percent compliance with provisions of the Resource Conservation and Recovery Act.

The program focused on three initiatives: waste management coordinators, RCRA self-assessments and backcharge accountability. The initiatives responded to specific compliance issues the Laboratory had encountered during the annual inspections by the Hazardous and Radioactive Materials Bureau of the New Mexico Environment Department.

The NMED inspections from 1992 through 1995 resulted in the issuance of compliance orders, which are the legal mechanisms by which the state lists RCRA violations and assesses fines and penalties. The violations were typically classified as housekeeping or administrative, rather than as problems that potentially endangered human health or the environment.

The state agency and the federal Environmental Protection Agency continued to express concern about the number of recurring violations, even those of an administrative nature. On Nov. 22, 1995, Ed Kelley, director of the Water and Waste Management Division of NMED said in a letter to Dennis Erickson, director of the Environmental, Health and Safety (ESH) Division:

"I am troubled by the number and type of 'routine' violations that recurred at LANL. ... The violations that were noted involved, quite frankly ... relatively simple housekeeping measures that involved very basic compliance efforts ... such violations are unwarranted and due to negligence by LANL employees."

The Laboratory has not yet achieved its goal of 100 percent compliance, but the record is improving. On July 17, 1996, a week after the close-out of the 1996 inspection, Kelley wrote to Thomas Todd, manager of the Department of Energy's Los Alamos Area Office:

"The NMED wishes to commend you and your staff and the LANL staff for improvements made in LANL's efforts to comply with the New Mexico Hazardous Waste Regulations. ... LANL has improved its hazardous waste regulatory compliance status. ... The violations cited during this inspection resulted in a Letter of Violation, which constitutes an informal enforcement action, instead of a formal Compliance Order resulting from more severe and/or more numerous violations."

"The NMED wishes to commend you and your staff and the LANL staff for improvements made in LANL's efforts to comply with the New Mexico Hazardous Waste Regulations. ... LANL has improved its hazardous waste regulatory compliance status. ...

The waste management coordinator initiative is intended to improve compliance with hazardous waste regulations. Chemical and Mixed Waste Operations (CST-5) centralized compliance activities by identifying and training 61 specialists who are responsible for helping waste generators ensure compliance with the extensive and detailed federal and state regulations, DOE orders and Laboratory policy. The coordinators, one-third of whom are assigned to the job full-time, also coordinate activities of waste generating and waste management organizations.

DOE/LAAO started assessing the Laboratory's hazardous waste facilities in 1992 because of its concern about the number and type of findings cited by the NMED during annual inspections. In 1995, ESH-19 began the self-assessment initiative in cooperation with the waste management coordinators to assess the Lab's performance in the proper storage and handling of hazardous and mixed waste to meet federal and state regulations, DOE orders and Lab policies. The findings of the assessment are communicated to generators, waste management coordinators and management to help line managers implement appropriate corrective actions to ensure continual improvement in the Lab's hazardous waste program.

The third initiative, backcharge accountability, assesses any penalties or fines to the responsible organization. In addition to ensuring equitable treatment, it is intended to forcefully impress the importance of RCRA compliance upon individual organizations. In 1995, 12 divisions responsible for violations were backcharged a total of more than $124,000.

Although DOE and the Laboratory were commended for the improvements following the 1996 state inspection, Kelley also noted: "There is, of course, still room for improvement and NMED expects that LANL continue to work toward full compliance with hazardous waste regulations, as well as other environmental regulations."

The goal for the Laboratory is to achieve zero violations in future RCRA inspections and to progress toward a model hazardous waste management program that reflects the level of excellence demonstrated by its science and technical programs.

Helping our neighbors

by Steve Sandoval

The Laboratory's Community Involvement and Outreach (CIO) Office is once again leading the drive to collect food, winter clothing, blankets and toys for distribution to the less fortunate throughout Northern New Mexico.

"Families especially appreciate food and toys during the holidays," said Lori Lujan of CIO, noting that food donations should be in the form of non-perishable staples or canned goods. Toys should be either new or in good working order, and winter clothing and blankets also should be clean and in good condition, she said.

The 1996 Holiday drive began Nov. 25 and continues through Dec. 13, Lujan said. Collection points have been established at sites throughout the Lab and its subcontractor offices.

Items collected will be distributed to needy families in Northern New Mexico. "This year, we hope to expand the drive to include participation by Lab contractors and the communities of Northern New Mexico," said Lujan.

Collection points are at the following locations:

- Otowi Building
- S-Site Cafeteria
- Los Alamos Neutron Science Center (LANSCE), Technical Area 53
- Technical Area 55
- Protection Technology Los Alamos (PTLA) headquarters, Pajarito Road
- Canyon Complex, 1100 4th St., across from the Hilltop House Motel
- Los Alamos Outreach Center, 1350 Central Ave., Suite 101
- Johnson Controls World Services Inc., Technical Area 3, SM-38.

Lujan said other technical areas are invited to establish collection points and to make arrangements to have goods transported by calling CIO at 5-4400.

"The 1996 Holiday Drive is an excellent opportunity to help those in need," Lujan said. "It is a voluntary effort with the sole purpose of helping our neighbors."

Lujan also credited Lab subcontractors for supporting the Holiday Drive.

Targeting small, start-up businesses

Tom Todd, left, manager of the Department of Energy's Los Alamos Area Office, Bob DeGrasse, DOE's director of the Office of Worker and Community Transition, Marvin Vigil, Española city Planning Director and Española Mayor Ross Chavez hold up a cardboard check at a ceremony in Española's City Hall. The check signifies the Community Reuse Organization's financial contribution to the city for construction of a business incubator building in the Johnnie A. Roybal Industrial Park in Española. The 30,000-square-foot building is scheduled to be completed in January. The incubator building will target small and start-up businesses in the Los Alamos, Santa Fe and Rio Arriba County region to expand job opportunities for people in communities impacted by reductions in force at the Laboratory. *Photo by LeRoy N. Sanchez*

Valentina "Valya" Sandberg at home in Los Alamos last summer on her way to swimming.

Russian orphans find a home

by Steve Sandoval

There are new dimensions to Jim and Jamie Nesmith's household this Christmas.

Jim Nesmith of the Human Resources (HR) Division and his wife Jamie adopted two children from Russia last spring. Laura Anastasia is 4 years old on Dec. 11; James Joshua Vitaly is 2.

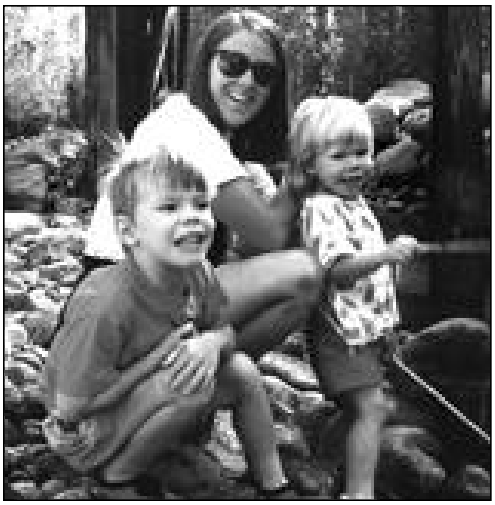
Last April the Nesmith's traveled to a state-run orphanage in Chelyabinsk in the former Soviet Union to meet their new children. Nesmith is an immigration specialist for the Lab.

"They were incredibly small, much smaller than we expected," said Nesmith. "We sat down on this very low couch and held our arms out, saying their names and encouraging them to come to us," Nesmith recalled of that first meeting. "Laura ran to Jamie first, then Joshua ran to Jamie. They both hugged her with all their might while stealing peeks at me from the folds of Jamie's sweater. They only knew women their whole life and men were an unknown to them.

"After a while Jamie took their hands and ran them through my beard," Nesmith continued. "We talked softly to them and I began pulling toys out of the little backpacks we brought for them." Within an hour, the new Nesmith family was bonded, he said.

For the Nesmiths, the adoption process was a profound experience, not just in starting a new family but in becoming aware of the needs of the thousands of other children in Russian orphanages. "We saw warm and loving relationships between the children and their caregivers, but the difficulties and shortages facing the orphanages create serious health problems for the children," said Nesmith. He cited among other things vitamin deficiencies and the increased exposure to other illnesses when children have to be hospitalized in Russian children's hospitals that suffer from shortages of critical medical supplies and equipment.

So the Nesmiths, along with Carol Wilkinson and Ken Bower, all of the Lab, established the Yabloka Foundation to raise funds to purchase medical supplies and equipment for Russian children's hospitals and orphanages. Yabloka is the Russian word for apple, the universal symbol for good health and nutrition.



Above: Carol Wilkinson of Accelerator Maintenance Development (AOT-2) introduces Valya to the art of fishing on the Roaring Fork River in Aspen, Colo., this summer. Son Jeff also is pictured. Below: James Joshua gets his first checkup two days after arriving home last April.

Jim Nesmith of the Human Resources (HR) Division holds Laura Anastasia, while Jamie Nesmith holds James Joshua at the Chelyabinsk airport the day they met their new children.

Wilkinson of Accelerator Maintenance Development (AOT-2) also adopted a child from a Russian orphanage. "It's something I would do again; it's worked out well," she said of her adoption of 3-year-old Valentina "Valya" Sandberg.

Wilkinson and husband Vern Sandberg of Subatomic Physics (P-25) also saw the needs of the children in the orphanages. "The hardest part of the adoption for me was seeing all the other children. You can't take them all and you want to," she said. "The foundation is our way of helping all those other children that we couldn't take."

Nesmith said the Yabloka Foundation will focus initially on the medical needs of children in Chelyabinsk, Sarov, Los Alamos' sister city, and Chelyabinsk 70. "We are building off the tremendous success that Ken had last year in sending medical supplies to Sarov," he said.

Last year Bower of the Community Involvement and Outreach (CIO) Office combined a gift of some $5,400 from the American Chemical Society Central New Mexico Section with $7,000 collected in Los Alamos to purchase nearly a half-million dollars worth of surplus pharmaceuticals. The medicines were sent to Sarov Children's Hospital in January 1995 through the State Department and MAP International, a Christian missionary organization.

"They used those supplies for a long time," said Bower. "I think that was one of the truly greatest things I've had the opportunity to be a part of," he continued. "They had nothing. They haven't had currency to buy medicines."

Laura Anastasia and James Joshua Vitaly Nesmith aren't blood relatives, but Nesmith said they've taken to each other quite well.

"When they left that orphanage they lost everything that had known in their life," Nesmith said. "They had never had anything that was really theirs. It all belonged to the orphanage.

"From the very beginning, they comforted each other tremendously," he said of Laura and James Joshua.

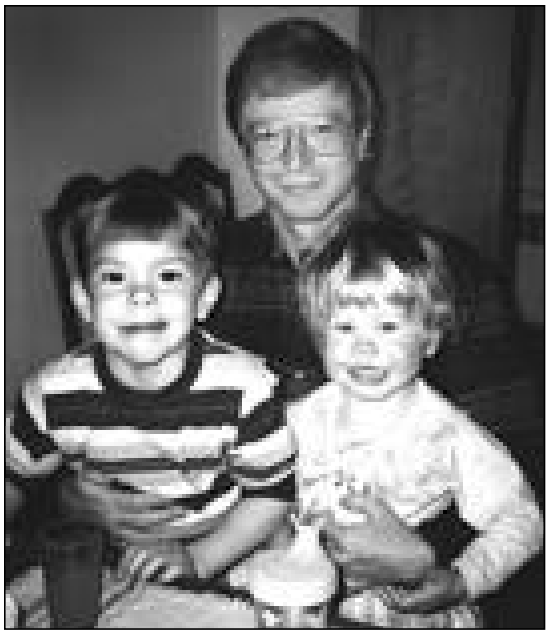
Eight months later, Nesmith said the children are rapidly picking up English and learning more about American staples like McDonald's, Mickey Mouse and Winnie the Pooh. "I get home and it seems like they say something new," said Nesmith. "One of Josh's first complete sentences in English was 'Laura did it,' " he laughed.

Nesmith said the Yabloka Foundation has established its own home page — www.yabloka.org — where interested readers can learn more about the foundation, the adoption process and how to help.

The Nesmiths also set up a home page where web surfers can see pictures of Laura and James Joshua: the address is http://www.nmia.com/-jln on the World Wide Web.

Bower is excited about the foundation, again recalling the first donation. "It made a tremendous impact, and we're overdo for another shipment. They need our help," said Bower. "[The Russian children's doctors] are talented. It wasn't a question of them not doing their jobs. The question was where would they get the materials they need to do their job.

"I sure would like to do it again."



Above: Valya enjoys a hot dog on Fourth of July during a picnic/ parade at her daycare center. Valya received her U.S. citizenship three days earlier.

Left: Vern Sandberg of Subatomic Physics (P-25) holds Valya, right, and son Jeff at home last summer.

Below: Laura Anastasia helps her new grandmother, Laura Jane Smith, in Smith's garden last summer.

Photos courtesy of Jim Nesmith and Wilkinson.

Lab videos honored at film and video festival

Two health and safety videos from the Laboratory recently received international recognition. Produced and developed by Industrial Hygiene and Safety (ESH-5), the videos "Air-Purifying Respirators" and "Leaks and Spills" were honored during the U.S. International Film and Video Festival's 29th annual awards presentation in Chicago. The event brought together producers and sponsors from throughout the world for a day-long program, featuring screenings of award-winning productions followed by an evening banquet and awards ceremony.

The competition is one of the world's leading events devoted to the selection and recognition of outstanding sponsored and independently produced business, television, industrial and information audio visual productions. This year's event drew 1,500 entries from 35 countries.

"Air-Purifying Respirators" received the festival's Silver Screen Award for "Directing" as well as certificates for creative excellence in "Writing, Concept" and the overall category of "Training and Education." This video provides introductory and refresher training for all Laboratory workers whose job requires the use of air-purifying respirators.

"Leaks and Spills" received the certificate for creative excellence in the category of "Writing, Concept." This video dramatizes the proper initial responses to an accidental release of chemicals and is an integral part of the health and safety training of all chemical workers at the Laboratory. At the request of the Technical Resources and Data Exchange (TRADE), ESH-5 is donating "Leaks and Spills" for distribution throughout the Department of Energy complex.

Many people contributed their talents and expertise to the development of these videos. These include producer, director and writer Rob Nicholas (ESH-5); director of photography and editor Larry Gibbons (former Lab employee); animation contributions by Training and Development (T&D); production assistant Reggie Radcliffe (T&D); advisors Tom Moore (ESH-5), Jeff Schinkle (ESH-5) and Mike Alexander of Water Quality and Hydrology (ESH-18); executive producers Brad Gallimore (ESH-5) and Helena Whyte (ESH-5), and project manager Barbara Hargis (ESH-5).

Rob Nicholas of Industrial Hygiene and Safety (ESH-5).
Photo by Fred Rick

The festival is operated under the auspices of the United States Festival Association.

Patricia Meyer, executive director of the competition, noted that, "The festival continues as a world leader in identifying outstanding producers. Recognition in the event greatly enhances a producer's image and reputation not only in their national market but internationally as well. This is of great value in today's emerging global economy."

Ortiz named Buyer of the Year

Lorraine Ortiz of Procurement (BUS-5) recently was named Buyer of the Year by the Rio Grande Minority Purchasing Council. The council gives the award to those it feels have provided outstanding customer service and mentoring to businesses, especially those owned by minorities and women. Ortiz received her award during a ceremony held Nov. 15 in the Albuquerque Marriott Hotel.

The council requested nominations from small businesses throughout the state about three months ago. Molzen-Corbin and Associates nominated the senior contract administrator, who has worked with several hundred small businesses during her 10-year tenure at the Lab.

Ortiz didn't even know she had been nominated for the award when the council notified her on Oct. 19 that she had won. She beat out buyers from organizations such as Honeywell, Sandia National Laboratories and Ethicon.

continued on Page 9

continued from Page 8

Ortiz also is a member of El Puente (The Bridge), a board comprised of representatives from the Lab, Sandia, the state of New Mexico and the RGMPC. Its purpose is to find ways to promote and enhance procurement opportunities throughout New Mexico and nationwide.

Pynn elected a fellow of the AAAS

Roger Pynn, deputy program director for the Los Alamos Neutron Science Center (LANSCE) and Energy Research Programs, has been elected a fellow of the American Association for the Advancement of Science. Pynn will be among those honored during an AAAS meeting scheduled for Feb. 15 (which happens to be his birthday) in Seattle.

Pynn, who has been an AAAS member since 1993, was notified of his election in early October. He said he didn't know who nominated him, but he was very grateful. "It's very gratifying to be recognized by your peers," he added. Pynn also belongs to the American Physical Society, the Materials Resource Society and the Norwegian Physical Society.

Pynn started his scientific career in 1970 at A.B. Atomenergi in Studsvik, Sweden. He also has worked at the Institut for Atomenergi in Norway, Brookhaven National Laboratory and Institut Laue-Langevin in France.

Pynn came to Los Alamos in 1987, where he was the director of the Manuel Lujan Jr. Neutron Scattering Center until 1995. In addition to his current position, Pynn is program manager for Basic Energy Sciences at the Lab.

Founded in 1848, AAAS represents the world's largest federation of scientists and has more than 144,000 individual members. The association publishes the weekly peer-reviewed journal Science.

Employee service anniversaries for October and November

October

45 years
Robert Sherman, ESA-TSE

35 years
Johnny Quintana, CST-8

30 years
Thomas Mills, NMT-6
Joseph Nasise, ESA-TSE
Richard Okinaka, LS-6
Henry Thiessen, P-25

25 years
Stanley Harkleroad, MST-5
Thomas Kwan, X-PA
Irvin Lindemuth, X-PA
Carl Lund, X-PA
Edwin Pena, CIC-5
Ramiro Pereyra, CST-15
Dorothy Serna, BUS-1

20 years
Thomas Bieri, ESH-5
Thomas Butler, ESA-EA
Patricia Grall, IP-PO
Karen Henneke, NIS-4
Thomas Houston, BUS-4
Robert Jones, ESA-DE
Wayne King, DX-2
Paul Lisowski, LER-APT
Joseph Lowery, MST-5
Mary Lujan, BUS-5
Jose Maes, ESH-1
Richard Mah, MST-6
Janet Martinez, MST-4
Robert Milford, AA
Carolyn Mills, C-XM
Donald Nye, MST-4
Margaret Reeves, HR-5
Terrance Robinson, ESA-WE
John Sarracino, X-NH
Florence Serna, BUS-5

15 years
Wallace Anderson, MST-7
James Babich, NMT-8
Paul Baca Jr., CIC-4
Barbara Blind, AOT-1
Jay Boettner, DX-DO
Manuel Bustos Jr., CIC-4
Anita Chen, CST-14
Marie Davidson, TSA-1
Edwin Davis, CIC-4
Carol Estes, FSS-DO
Walter Griego, NMT-2
Thomas Hardek, AOT-5
Gordon Jio, DX-2
Jonathan Longmire, LS-3
Barbara Lujan, BUS-5
Earl Peterson, TSA-10
Mark Rivera, NMT-7
Patricia Romero, HR-5
Louis Rosocha, CST-18
Steven Valone, MST-7
Peggy Sue Volz, ESA-DE
Robert Weeks, CST-25

10 years
Kent Abney, CST-11
Alice Barr, ESH-19
Adelaide Collins, CIC-6
Ada Deaguero, CIC-2
Ruth Gray, ESH-2
Kenneth Groves, ESH-IAO
Anne Henriksen, TSA-7
Rex Hjelm Jr., LER-MLNSC
Robert Jenkins, CIC-4
John Kinross-Wright, AOT-9
Deniece Korzekwa, MST-6

Myra Martinez, ESH-3
Janet Moody, HR-6
Roberta Mulford, DX-4
Peter Olivas, AOT-7
Cathy Post, DIR
David Reagor, MST-11
Dale Redd, AOT-2
Robert Teller, FSS-20
Peter Veverka, ESH-12
Jerry Watson, AOT-DO
Stanley Zygmunt Jr., CST-18

5 years
Kay Adams, MST-4
Sharon Bobbitt, CIC-DO
Susan Catherwood, FSS-15
William Chroninger, MST-FAC
Virginia Cline, X-CM
James Johnson, BUS-2
Michael Kuchinsky, CIC-9
Ning Li, MST-10
Sandra Lucero, CST-DO
Minnie Martinez, FSS-15
Elise Mignardot, BUS-7
Edward Rodriguez, ESA-EA
Jay Scheuer, P-24
Nadine Shea, DX-DO
Jehanne Simon-Gillo, P-25

November

35 years
Alfred Bateman, ESA-WE

30 years
W. Dale Breshears, CST-6
Barney Cushing, DX-6
Nicholas Nicholson, NWT-PO
Robert Piatt, ESA-WMM
Marvin Vidrine, FSS-6

25 years
Samuel Alexander, DX-Do
Frederick App, EES-5
Veronica Atencio, CIC-12
Harold DeHaven, NIS-1
Sylvia Herrera, HR-1
Edward Quintana, BUS-4
Tom Ortiz, P-24
Theodore Reed, CIC-8
Thomas Rivera, DX-2
Floyd Segura, HR-1
G.T. Schappert, P-24
Lawrence Sherman, BUS-8
Rebecca Trujillo, CIC-17
Warren Wood, NMT-DO

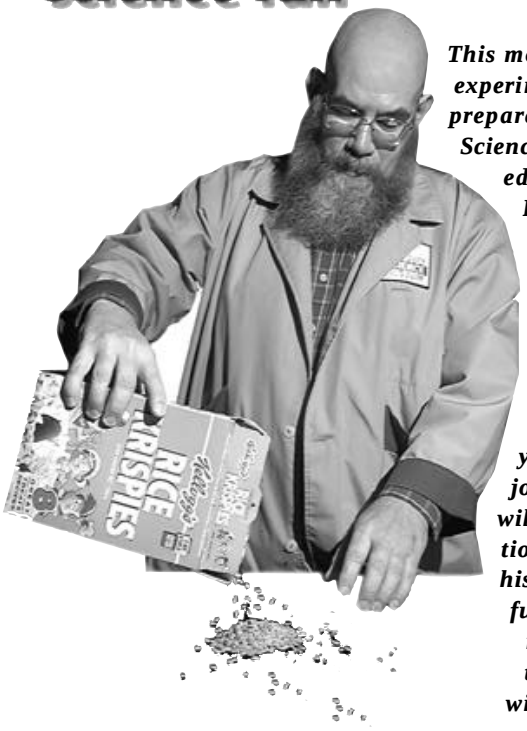
20 years
Patricia Archer, BUS-3
George Biggs, FSS-16
Orvil Bradley, ESH-5
Arthur Garcia, HR-DO
J. Benito Garcia, NMT-8
Alan Gibbs, NIS-2
John Gustafson, AA-1
Ann Hayes, CIC-ACL
Annette Houston, BUS-5
Mahavir Jain, FSS-16
Roger Kopp, X-PA
Mary Martinez, BUS-3
Harry Martz Jr., TSA-1
Maryann Montoya, BUS-1
Christopher Morris, P-25
James Roach, TSA-4
Phil Romero Jr., BUS-4
Margaret Sanchez, BUS-1
Jose Serna, NIS-4

15 years
Louis Borrego, NMT-8
James Brainard, CST-18
Bernard Cameron, MST-7
Meredith Coonley, PA-3
Deborah Davis, HR-5
James Dearing, TSA-10
John Edwards, ESA-MT
Joel Farnham, CST-11
Eric Ferm, DX-3
Paul Gifuere, TSA-10
Galen Gisler, NIS-2
Sharon Hickey, LC-GEN
Daniel Hughes, ESH-3
Mabel Jaramillo, BUS-5
Rudy Maez, NMT-4
Robert Ortiz, BUS-8
F. Coyne Prenger, ESA-EPE
Sandy Roybal, HR-5
Robert Schuch, ESA-WMM
Liza Tafoya, FSS-12

10 years
Cynthia Boone, IP-PO
Roger Bracht, ESA-MT
Christine Chandler, LC-GEN
Olivia Naranjo, ESH-2
Robert Quintana, CST-26
Scott Richmond, ESA-TSE
Linda Riley, NIS-8
Virgil Sanders, QP
Sharon Seitz, CIC-12

5 years
Pedro Ayala-Rivera, BUS-2
Leah Bustos, CST-12
Stewart Duncan, PAO
Lucille Gonzales, P-DO
Bryan Henson, CST-6
Patrick Longmire, CST-7
Peggy Martinez, FSS-6
Thomas Meyer, DoD-PO
John Mosher, P-21
Andrea Palounek, P-25
Nina Rosenberg, EES-DO
Robert Ryne, AOT-1
Terrance Vergamini, ESH-1
Robert Villarreal, MST-5
Mary Waltman, LS-4

science fun



This month's home experiment was prepared by Bradbury Science Museum educator Garry Franklin, who has educated — and entertained — hundreds of students and other museum visitors. Garry, a teacher for 18 years before joining the Lab, will provide additional items from his repertoire in the future. We invite readers to share these experiments with their families.

Dancin' Rice Krispies

Rice Krispies make sounds when you add milk, but can they dance? Try this activity to find out. You first have to make a dance floor, which in this case is really a dance ceiling. To make the dance floor you will need a piece of clear plastic (Plexiglas) about 20 inches on each side and about 1/8 inch thick. You also will need two pieces of wood, 2 x 4s, about 20 inches long. (If you do not have these materials you can use a clear plastic container like those used to take sandwiches to school.)

Place a handful of Rice Krispies on a nonmetallic table. Place the 2 x 4s on either side of the cereal, about 20 inches apart and 4-inch side down. Then lay the plastic on the wood. You now have your dance floor.

To make the Rice Krispies dance, you will need a piece of cloth — flannel or wool. Rub the top of the plastic vigorously while applying a little pressure so that the plastic bends slightly. Watch what happens!! The Rice Krispies begin to stand on their ends and then dance back and forth from the table to the plastic.

What's happening?

All matter is made up of atoms that have a positively charged center called the nucleus, which is surrounded by negatively charged electrons spinning around it. Rubbing the plastic with the wool or flannel actually rubs electrons off the cloth onto the plastic. Since plastic is a very poor conductor of electricity (an insulator), the negative charges do not flow over the surface but stay put where you rubbed. This is static electricity.

The Rice Krispies started out neutral, meaning they had equal amounts of positive and negative charges evenly distributed throughout each piece of cereal. The negative charges on the plastic repel (push) the negative charges in the pieces of cereal away from the surface so that the surface of each grain of cereal has more positive charges facing the plastic. The cereal becomes polarized with two areas of different charge. When the positive charge on the surface of a piece of cereal becomes large enough, it is attracted to the negative charge on the plastic and is lifted up to the plastic. When it touches the plastic, some of the negative charge is transferred to the surface of the cereal, making it the same charge as the plastic, so it is then repelled toward the table. When the cereal touches the table, it begins to lose the excess negative charge, and the process begins over again. This will continue until the plastic loses most of its charge.

Now try these variations!

• Does the shape of the cereal make a difference? Rice Krispies have many pointed edges. Try cereals that have round shapes. Do the other cereals dance better, worse or not at all?

• Instead of 2 x 4s, use other supports to make the plastic higher or lower. Does the height make a difference on the dancing of the cereal?

• Try other types of cloth. Which type of cloth works best?

• Inflate a balloon and rub it with the flannel or wool or rub it on your hair. Bring it next to the cereal. What happens?

Snap, crackle, dance ...

Garry Franklin of the Bradbury Science Museum shows children from Pojoaque Pueblo how static electricity makes Rice Krispies "dance." The interested onlookers include Mary Alice Casaus, 7, (facing camera on left) and Betti Jean Gallegos-Viarrial, 9 (next to Mary Alice). *Photos by Fred Rick*

This month in history

December

1621 — Galileo invents the telescope

1942 — First fission chain reaction is achieved at the University of Chicago by a team led by Enrico Fermi

1942 — The Los Alamos Ranch School receives official notification that the site is needed for military purposes

1953 — The security clearance of J. Robert Oppenheimer is rescinded

1966 — The nation's first research and development program in nuclear safeguards begins at the Laboratory

1962 — President Kennedy visits the Laboratory for briefings on Project Rover and other subjects

1972 — Astronauts Harrison Schmitt and Gene Cernan land on the moon during the Apollo 17 mission

1979 — The Laboratory closes for one full day and part of another as the result of a storm that dumps nearly two feet of snow

1987 — The Laboratory initiates a holiday closing period as a cost-saving measure

1987 — President Reagan and President Gorbachev sign the INF treaty to eliminate intermediate-range nuclear weapons

1988 — A new fingerprint technique developed at the Lab makes it possible to take prints from a variety of different surfaces

1990 — The Environmental Restoration Community Reading Room opens at 2101 Trinity in downtown Los Alamos

1991 — The Laboratory is designated by the Department of Energy as a National High-Performance Computing Research Center

Syndicated material removed at the request of the syndicate

Bizcochitos:
A seasonal favorite

Cecilia Burciaga of Machine Science Technology (DX-6) with a plate of her prize-winning bizcochitos. A subcommittee of the Lab's Hispanic Diversity Working Group held a bizcochito-baking contest as part of Hispanic Heritage Month. *Photo by Fred Rick*

by Steve Sandoval

When the holidays beckon and waistlines widen, eggnog and sugar plums often can be found.

Cecilia Burciaga of Machine Science Technology (DX-6) is modest when talk turns to her bizcochitos, those seasonal favorites that grace Southwestern dining tables and make wonderful holiday gifts.

Burciaga's cookies were selected as the best from a number of bizcochitos brought by Laboratory employees to a tasting contest the Lab held during Hispanic Heritage Month. A panel of Lab employees willingly served as bizcochito judges.

"I lost both my mother and sister; they were the bizcochito makers in the family," said Burciaga. "I sort of took it up."

While admitting that husband Ernie of Waste Management and Environmental Compliance (NMT-7) does most of the cooking at home, she proudly said her cookies are winners in the gift appreciation department.

Burciaga's Bizcochito recipe

1 pound pure lard	1 cup sugar
2 eggs	6 cups flour
1/4 cup red wine	2 tsp. anise seed (slightly crushed)
1 cup sugar mixed with 2-3 tsp. cinnamon	

Cream lard until fluffy. Add sugar slowly gradually, beating well. Add eggs one at a time beating well. Add anise seed. Mix in flour by hand, using enough wine to make dough soft. Let stand about 10 minutes.

Use cookie press or roll out dough on lightly floured board and cut into squares. Bake at 350 degrees for 15 minutes on ungreased cookie sheets. Remove from sheets while hot and dip top side in sugar/cinnamon mixture.

Burciaga said cooking sherry or brandy can be used and lard is a must even if the health conscious cringe. "The lard is what makes them light," she said. "You can't make bizcochitos without lard."

Where did the 'z' come from?

by Steve Sandoval

There's a story behind why bizcochito, at least in New Mexico, is spelled with a "z" and not an "s." In fact, the issue led to much discussion in 1989 when the state Legislature named that anise-cinnamon flavored, calorie-laden delicacy as the official state cookie.

House Bill 406, passed in the 1989 legislative session and signed into law by then Gov. Garrey Carruthers, nearly required a House-Senate conference committee before becoming law. When the bill was first introduced, it was spelled biscochito, according to local newspaper reports and from information provided by the state Library in Santa Fe.

Sen. Tom Rutherford, D-Bernalillo, sponsored an amendment changing the spelling to bizcochito. He said the House was doing a disservice to the cookie's reputation by spelling it both ways.

The amendment was offered after Spanish language scholars insisted the proper spelling was with a "z." Historian and translator Sam Adelo reminded politicians in a New Mexican newspaper column that the Dictionary of New Mexico and Southern Colorado Spanish spells the cookie with a "z."

How revered is the bizcochito in New Mexico? Legend has it that many years ago, in the village of Mesilla, "republicanos" and "democratas" waged a bloody battle in the village plaza because "neither side would give ground, fearing the other would reach 'Dona Isabella's puerta' first and eat up all the biscochos and drink all the vino," wrote Juliette C de Baca in a 1966 New Mexico Magazine article.

Perhaps fittingly, the House Consumer and Public Affairs Committee in 1989 accepted Rutherford's amendment to change the spelling and the bizcochito has gone on to join the yucca, roadrunner, pinon, cutthroat trout, black bear, turquoise, chile (with an e) and pinto bean as the official state flower, bird, tree, fish, animal, gem and vegetables, respectively.

Either way it's spelled, the rich sugar cookie remains a favorite of Northern New Mexicans, particularly during the holiday season.

Reflections
Mail Stop C318
Los Alamos, NM 87545

Nonprofit Organization
U.S. Postage Paid
Los Alamos, NM
Permit No. 532

LALP-96-116