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# the laboratory connection

your community's link  
to information, opportunities, and people  
at Los Alamos National Laboratory

April 2004

a  
word  
from **Santa Fe Indian School  
Governmental Tribal Liaison/Director**

**M**y ancestors were the designers and builders of the first passive solar buildings at Puye Cliff Ruins, Bandelier National Park, and Chaco Canyon. They were astronomers studying and interpreting the stars and solar system to determine planting and harvesting time; they studied the migration of the geese, elk, and other birds and animals to determine the length of the seasons. They taught and mentored the young and old that man revolves around nature and whatever decision was made was going to impact the next and future generations.



Walter Dasheno

I see no separation between the environment and what I believe in. My spiritual beliefs, my culture and the environment are one and the same. There is a balance among all things, social, spiritual, cultural, environmental and so on.

We now face a number of environmental issues that potentially threaten the very fabric of our existence. These include environmental risks associated with past, present and future activities at the Lab. I realize these environmental problems will not be solved overnight; however, the Lab must lead and begin implementing remediation and clean-up, otherwise we may all suffer the negative impact to our communities.

Equally important is the economy, and the Lab is a major player. Any direction changes, budget reductions, and new missions are of vital concern to our pueblo, its affiliates, and New Mexico.

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## The Pueblo Feast Day

On a clear, cold January morning, you drive down from “the Hill” because you’ve been invited to attend a Pueblo Feast Day. It will be celebrated by indigenous people native to the river valley below long before it was called Rio Grande. You’re not quite sure what to expect. You sense honor in being asked to come, and feel that witnessing something that has been ongoing for more than a thousand years should be worth seeing. You know there will be music and singing and dance. Such that has been performed before any European ever wrote an opera.

The parking lot is an expansive, dusty field outside the gates that guard the inner compound of adobe structures surrounding a large courtyard with a massive tree at its center. To the left of the gates is a church in the same architectural style as the houses. It bears testimony to a more recent culture, yet it blends in and seems to belong. The color is almost exclusively tan, the buildings matching that of the earth. The absence of greenery is due to the high desert in winter following years of drought, but more so, due to the desire of the people not to embellish upon or change what nature has given them. Nature, and the utmost respect for it, has been characteristic of these folk ages before Greenpeace, the Sierra Club, and even the Environmental Protection Agency.

As you leave your car, the sound of distant drums is unmistakable; drawing nearer, chanting voices reach your ears. Upon entering the compound, you see the dancers. They are a hundred strong, strung out in a line that weaves through the courtyard’s center, following two leaders who set the pace for those who trail. You notice that seniority prevails because toward the line’s end come the youngsters who are no more than three or four years old. They move to music created by perhaps fifteen men bunched in two rows, the front of which carries the drums. All chant as they stand fast or move around the periphery of the dancers. Obviously, there is an importance to these men above that of being the basic structure of the ceremony. Most are pueblo elders who bear the burden of leadership, and somehow you know that they began their ascent to leadership from the tail end of that dance line.

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Of course, the clothing is as traditional as it is stunning. The myriad of bright colors spans the spectrum and is enhanced by feathers, ribbons, and beads. Not surprisingly, the women are the more impressively dressed in graceful, ankle-length leather and cloth, many with woven shawls over their shoulders. Their movements are more restrained and dignified but no less intense and meaningful than their male counterparts. Later you will learn that every garment and accessory from top to toe was handmade within the pueblo, and some were worn by ancestors during the nineteenth century on this very ground to the very same beat and chant.

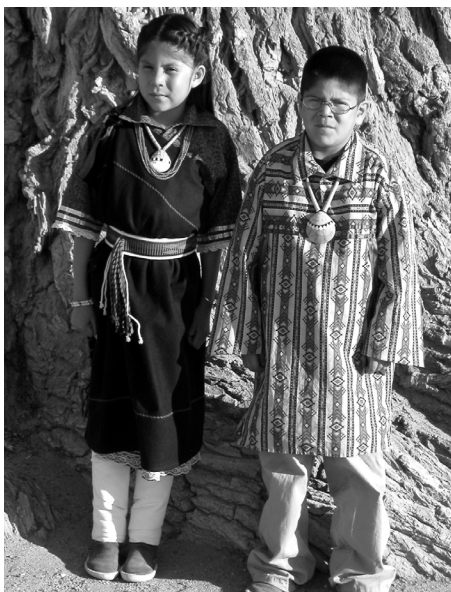
Finally, the dance line moves to the edge of a building, up a staircase, and disappears behind an adobe wall. Your host tells you that there will be more to come, that the performers, especially the youngsters, need a rest between dances, so why don't you come in and have something to eat. You aren't prepared for that. Why it didn't occur to you that part of a feast includes food is probably because your frame of reference is countless movies that avoid such civility in preference to war whoops and battle scenes. The table overflows with sustenance, and the door is open to all. The fresh bread is as good as you've ever tasted and reminds you why it is universally called the staff of life. Inside is nourishment for the body; outside, the ceremonies feed the spirit.

You've got a bunch of questions that you are hesitant to ask, not at the risk of exposing your ignorance, but because they may offend by probing what is not your business or beyond your ability to comprehend. There are those little pieces of wood vertically standing in what remains of a bonfire set in the courtyard last night. The dances began at sunrise, so some private ceremonies probably began

earlier. You are told that the little pieces of wood are prayer sticks. You need probe no further than that.

Then more dances come, and you suddenly realize that what seems the same is actually very different. Although obviously generic and similar in tempo and tone, each dance is quite another story. The drumbeats change, as do the chants and dance steps. Like all operas that sound the same to the uninterested, so too do tribal celebrations, or so they did to you up to now. Here is an insight beyond the surface of what you see in films and traveling shows. Here is a people at home doing their thing, celebrating their heritage, and manifesting a pride that is proper, exemplary, and wonderful.

So, you ask how one learns to do what is happening before you. Is there a script? Musical score? Choreography? Anything that's written down to teach and instruct all those people out there who seem to know exactly what they're doing? The drummers are in sync, the chanters on the same note, and each dancer's foot is hitting the ground in unison. Well, maybe not the four-year-old in back who's trying to copy the moves of the five-year-



Two young Pueblo Feast Day dancers.

old in front of him and succeeds only in tripping himself every so often. There's also no somebody standing on a podium with a baton conducting the whole scene.

When the answer comes back that there's no script, score, choreographer, or anything on paper or tape from which to teach, you're more than a little overwhelmed. How they are able to do what they do evokes the old vaudeville one-liner about the tourist asking how to get to Carnegie Hall. "Practice, practice, practice," is the reply. And that's how it happens here with more than a millennium of tradition mixed in to ensure consistency; father to son, mother to daughter, older sibling to younger, for centuries and centuries.

Is preserving such a tradition worthwhile? The answer is in the eloquence of what you've just experienced. The question then becomes unnecessary.

You begin to better understand the futility and wrongness of comparing cultures with a view towards establishing dominance. Those who would say that mine is better than yours because while your ancestors were scratching line drawings on the sides of caves, mine were painting the ceiling of the Sistine Chapel, miss the point and stand on the pernicious slope of prejudice. Neither culture is better because in both cases the cup is filled to its brim. To contemplate one over the other leads to what tears people apart, not to what brings them together. Thus is the danger of promoting ethnic differences without the perspective of understanding.

On the drive home, it occurs to you that the beginning of such understanding is readily available. It is not necessarily in books or pamphlets or movies or stand-downs or sensitivity training. It is but a twenty-minute drive down the hill. You wish that others might make the trip.



## Cooperative Agreements: A Tool for Building Trust

The principle of government-to-government relationships between the Department of Energy (DOE) and the pueblos located in the region where Los Alamos National Lab resides was established through Accords signed in December of 1992 with the pueblos of Cochiti, Jemez, San Ildefonso and Santa Clara. In addition to affirming the sovereignty of the tribes, the accords provide the framework for a relationship in which DOE pledges to consult with the Tribes about impacts to their cultural, religious, and environmental resources.

In November 1994, Cochiti, San Ildefonso, and Jemez Pueblos further formalized their relationships with the Laboratory and the University of California (UC) through cooperative agreements, which establish a mechanism for discussing and addressing areas of mutual concern, such as economic development, and environmental and cultural issues. Two years later, Santa Clara Pueblo signed its own cooperative agreement including an educational initiative, in which the Lab, UC, and DOE pledge to improve educational opportunities for Native Americans at the Lab. In 1997 and again in 2003, the agreements were reaffirmed, and the education component was added to the earlier agreements.

The agreements have not only improved Lab-pueblo relations, they have led to increased awareness of Lab activities and their effect on the pueblos, as well as improved opportunities for American Indians at the Lab.

Elmer Torres of the Lab's Government Relations Office served as Governor of San Ildefonso Pueblo during the time that the cooperative agreements were negotiated and signed.

"People were skeptical at first," he said. "At first, a lot of the pueblos viewed the Lab as 'the secrecy place.' Because the educational and employment opportunities have become better known, there has been steady progress.

"The relationship between the Lab and the pueblos has gotten a whole lot better over the years," he said, "but we needed to build trust."

At San Ildefonso, whose boundaries touch DOE-owned property, a pilot environmental restoration project was started in March 1996. The project, which is still ongoing, involves characterization and background sampling of pueblo soils, surface water and groundwater, wildlife and vegetation, as well as cultural resources and archaeological surveying. Environmental monitoring is currently also being done on other pueblo lands. Pueblo staff, including governors, have visited some of the Los Alamos canyons to check for contamination, and they have seen some of the Lab's monitoring wells.

Torres said that the relationship between the Lab and neighboring pueblos has become much closer since the Cerro Grande Fire of 2000.

"The environmental directors at the pueblos are now in touch with their counterparts at the Lab," Torres said. "The pueblos know that the Lab can't supply funding, but they will provide technical assistance, which has been very helpful."

Torres said that after the recent fires in Nambe and Taos, the Lab provided air monitors and has also performed

water monitoring for flood control.

The agreements have also helped bring about initiatives in economic development and education. Task order agreements for work supporting the Lab's Cerro Grande Rehabilitation Project were negotiated with the four cooperative agreement pueblos in 2001.

Work performed by the pueblos included erosion control and forest stewardship, including tree thinning, ground sampling, and water sampling. The Lab has also provided assistance related to science education, including tutoring and after-school programs at the pueblos.

Cooperative agreement executive meetings are held twice a year. A small working group that includes representatives from the Lab, DOE, UC, and the pueblos meets once a month.

"The agreement between the Laboratory and the pueblo is a tool that we use to establish dialogue and good communication, build on our relationship, and address issues related to environment, health, and safety," said Torres. "I'm proud to have been a part of it."



## Student Programs Entry Point for Native American Engineers and Scientists

When Project Leader Linda Gallegos was a senior at Pojoaque High School in the mid 80s, she participated in the Lab's first outreach program for area high school students. Twice a week for a semester, the Pojoaque Pueblo native joined other students who were bussed up to the Lab for the afternoon. Staff members donated their time to inspire and mentor the labor pool of the future.

"I was interested in computers," she said, "although at that time they were more of an idea than a reality for Pojoaque students. A staff member at the Lab taught us about making circuit boards."

After graduation, Gallegos earned an Associate's Degree in Computer Science at Santa Fe Community College and was hired by the Lab's Weapons group (now Engineering Sciences and Applications) under its Undergraduate Studies (UGS) program to provide technical administrative support. After earning her Bachelor's Degree, Gallegos went into the Graduate Research Program (GRA). Upon completion of her degree, she was hired as a technical administrative specialist.

"I provided project management support, developing schedules and project plans for various weapons programs, as well as providing hardware and software support for the group," she said.

Gallegos eventually became a computer systems administrator. After she implemented a computerized maintenance management system (CMMS) in support of the group's programmatic equipment, she was asked to be the project leader for the implementation of the Laboratory's CMMS system.



Project Leader, Linda Gallegos also helps the Lab recruit at local high schools.

Gallegos is now the Enterprise Project Management (EPM) Project Leader.

"The Lab's education programs gave me the opportunity to get an education complemented by work experience," Gallegos said.

As a member of the Native American diversity working group, Gallegos has recruited students at local high schools. "In meeting with students at career fairs, the key is one-on-one discussions with someone with first hand knowledge," she said. "The students enjoy talking and listening to someone who has participated in the program."

A meeting with Tribal Team member Barbara Grimes led to a first job at the Laboratory for Fawn Coriz, who now manages five processing technicians for the Lab's MOX Fuels project. Coriz, who is from Nambe and Santo Domingo Pueblos, graduated from St. Michael's High School and earned a degree in Chemical Engineering from

UNM. She is currently earning an MBA in Technology Management, also from UNM.

"I was always really good in math," Fawn said, "and I knew that there were good careers at Los Alamos. During college, I did fundraising for the Institute of American Indian Arts. When I met Barbara, she found me a UGS position at the Bradbury Science Museum doing fundraising, which was my entry to the Lab."

After a summer at the Museum, Coriz met a Ph.D. chemist at the Wellness Center, who hired her into the Environmental Science and Health Division to do soil sampling and other environmental remediation tasks. She held a full-time job while also attending school fulltime at UNM-LA.





Coriz has served as a science fair judge at Pueblo elementary schools and supports the Lab's student outreach efforts.



Pecos participates in the Lab's educational outreach programs at the middle and high school levels.

During Native American month activities five or six years ago, Coriz attended a panel discussion on diversity at which the Nuclear Materials Technology Director expressed his desire for a diverse workforce in NMT. She subsequently wrote him a letter and was hired into the Nuclear Materials and Technology for Actinide Separations group. When she outgrew the UGS program, she was hired as a contractor at a technician position.

"I knew that experience was the key, along with education," she said. "If you have both, you're much more marketable."

Coriz credits the Lab's student programs with helping her get her foot in the door and connecting her to mentors who helped her chart her career path.

"I was really lucky it all worked out the way it did," she said. "Initially, I didn't get the job I was looking for because I really wanted to get out of fundraising. But it all worked out perfectly."

"Having mentors helps with school and helps you find out what you really want to do," she said. "If you know what you want from your education, and are paired with an individual who's gone through the same program, that's very helpful."

James Pecos from Cochiti Pueblo is currently a Technical Staff Member working as a supervisor in a LANL nuclear materials lab. He began working here 22 years ago as an electronics technician.

Although Pecos started working for the Lab in the early 80s before the inception of most of our current student programs, he was able to take advantage of the Laboratory's

Professional Development Program to earn two degrees.

"I had a certificate in electronics from a technical/vocational school when I started at the Lab," he said. "But I knew that the Lab reimbursed costs for job-related college course work."

Over the past 17 years, Pecos has attended night school at UNM-LA to earn his Associates Degree in Chemical Technology and later attended the College of Santa Fe, earning a Bachelor's Degree in Computer Science. The Lab reimbursed him for his tuition expenses for all the courses he completed satisfactorily.

"The LANL student programs provide an excellent opportunity for employees to get an education while working fulltime," he said. "I highly recommend this program to other employees."

## Small Business Outreach Includes Local Pueblos

LANL's new Laboratory Small Business Advocacy (LSBA) group has developed an outreach strategy to serve the Eight Northern Pueblos, plus Jemez and Cochiti. Based in the Community Relations Office (CRO) in downtown Los Alamos and an Española Resource Center located at Northern New Mexico Community College, LSBA will provide assistance in supplier development, outreach operations, and regional procurement to the pueblos.

A communication plan is already in place that will promote understanding and communication of business opportunities and initiatives. The plan will also ensure accurate and consistent communications with internal and external Lab entities and Tribal Governments to identify and communicate potential opportunities.

An inventory of regional businesses, including those tribally owned, will be conducted. LSBA will promote the

capabilities of these businesses to Lab end users and procurement personnel. A first step has begun by introducing tribal owners to LANL procurement officers.

Also in LSBA's objectives is the identifying of new markets and procurement opportunities by assisting tribal small businesses with 8(a) and HUBZone certifications to increase exposure to federal businesses other than LANL. Training sessions will be set up to acquaint these organizations with such things as responding to Request For Proposal (RFP) procedures and Laboratory safety requirements.

In addition, LSBA will also cooperate with Supply Chain Management at LANL to advocate regional procurement and diversification of the northern New Mexico economy. Developing and

implementing a searchable database of tribal small business capabilities, products, and services will greatly enhance the overall operation.

Vangie Trujillo, along with Elmer Torres from the Government Relations Office, is heading up the LSBA-Pueblo business initiatives. They have met with officials of three Pueblos to present the LSBA program. They will be meeting with the remaining leaders in the near future. Trujillo can be contacted at (505) 665-2963.



Above, left to right are; Vangie Trujillo, LSBA; Patrick Woehrle, Government Relations Office Director; Elmer Torres, Government Relations Office; and Santa Clara Pueblo Governor, Jeff Sisneros. Trujillo is the primary point of contact for all Pueblo questions and concerns.

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Downsizing Los Alamos, for example, could have a devastating impact on our local economy. This too is an environmental issue.

My pueblo faces environmental challenges daily. We are practical people, we can be pragmatic, and we are responsible. We are all custodians of Mother Earth. She is fragile. She is just as present in Los Alamos as she is in and on our pueblo. The environment is a weaving of people, animals, birds, trees and plants, water, air, and the "spirit." When we dislodge any one of these, we create an imbalance.

Today, I see our young pueblo scientists, engineers, technicians, and support personnel who are educated and knowledgeable using the technology offered at the Lab. One example is the Cerro Grande Rehabilitation Project, which provided our pueblo with economic opportunities to use many

skills and work on a variety of activities, including erosion control, forest stewardship, tree thinning, soil sampling, and water sampling.

We are proud of those achievements and look forward to future efforts where we can further partner with the Lab to meet the economic development and business needs of my pueblo and its affiliates throughout the region. The Laboratory is engaged in technical applications to deter terrorist threats now more than ever, and because some of our pueblo land is adjacent, we too need to address these threats. We welcome requests for support in planning and implementing Homeland Security to ensure the safety of all.

The opportunities and benefits to each entity are affected by what the federal government does in the future and as long as there is this relationship, time and lack of funding are our only enemies.

I envision a bridge of continuing partnership between the Laboratory and the pueblos that includes expanded student mentoring and visiting Laboratory scientist programs. I also envision a stronger partnership between the Los Alamos National Laboratory Foundation and the Santa Fe Indian School regarding scholarships and funds for community-based programs.

Our pueblo communities are the last of the "frontiers" that used to be. We are also the gatekeepers of our culture, language, and life. We have endured through time and will continue to endure and survive. It is our destiny to remain and be the caretakers of our ancestral homelands. We will be here when man steps into the universe "where no man has gone before," just as we were when Lab predecessors "changed the world."

Let us walk forward together.



## Tech Assistance Strengthens Partnership and Improves Quality of Life

For the past four years, Taos Pueblo Environmental Director, Robert Gomez, has been interacting with the Laboratory's Tribal Relations Team. For the past two years Gomez has worked more specifically with the Risk Reduction and Environmental Stewardship (RRES) Division to acquire technical assistance on several environmental issues.

"Our interaction with LANL has helped us understand and address environmental mitigation issues. If our point of contact, Elmer Torres, didn't have the specific skills to provide us assistance, he always put us in touch with LANL experts who did," Gomez said.

Taos Pueblo's Environmental Department first contacted Torres during the creation of an Emergency Preparedness Plan in 2000. Torres and LANL experts reviewed the plan and made technical comments. The plan was subsequently approved by the U.S. Environmental Protection Agency. The pueblo's next request for technical assistance involved a sick building investigation in 2001.

"People were getting dizzy and having respiratory issues at a tribal office building that provided services to infants and elderly tribal members. Mr. Torres arranged for a LANL industrial hygienist to help us mitigate the problem," Gomez explained.

Gomez, on behalf of Taos Pueblo, also requested technical assistance in 2003 after the Encebado Fire. The fire burned roughly 5,000 acres of forest land.

"Taos Pueblo is a little unique in that we control the watershed—we are one of the few pueblos in the nation to do that. We were very concerned about the impact of the fire on the water," he explained. "Because the pueblo has been here a long time, the people have come to depend on the river water for drinking water, irrigation, and livestock

watering. People still draw surface water from the Rio Pueblo for drinking."

Ken Mullen, an environmental scientist from the Laboratory's RRES Water Quality and Hydrology group (RRES-WQH) arranged to take some water samples and assisted with the data collection and analysis. His group also set up an automatic water sampler.

"We took one storm runoff sample and three base flow samples at different locations on the Rio Pueblo," Mullen said. "We also took one follow-up sample to ensure that the chemistry had returned to more normal levels after a storm runoff event.

Mullen also said that RRES-WQH plans to take at least one more follow-up sample this year as well as collect and analyze the data. Mullen and the Water Quality and Hydrology Group will assist the Taos Pueblo Environmental Department with continued water sampling and analysis.

The RRES Meteorology & Air Quality (RRES-MAQ) group also provided technical assistance in 2003. The group installed a PM2 air monitor and monitored the air for 24 continuous hours.

"The LANL scientists trained our technicians on how to install the air monitors and how to analyze the data," Gomez explained.

Gomez said that Taos Pueblo is appreciative of the partnership between itself and the Laboratory.

Taos Pueblo, the Lab's Tribal Relations Team, RRES and FWO will be working together to provide technical assistance for mitigation of fire-damaged land.

Greg Kuyumjian, from the Santa Fe National Forest Service, also participated in the tour and may help with the remediation work at Taos Pueblo. Kuyumjian was a member of the original Forest Service Burned Area Emergency Response Team (BAER). He was originally assigned to the area on May 8, 2000, and then was assigned to the Cerro Grande rehabilitation project.

"Elmer Torres and the Lab have provided us technical guidance and some mentoring elements," Gomez said. "We'll be keeping in regular contact to gain any experience and knowledge that will enhance the quality of life on the pueblo."



Pictured right to left are: Taos Pueblo Governor, John A. Mirabal; Alfred Suazo, Governor's staff; Robert Gomez, Environmental Director; Delbert Chisolm and Waylon Brown, War Chief's staff; and War Chief, Frank Marcus.

## Lab Team Leader Maintains Alaska Connections

Kane Fisher is a Yupik Eskimo whose adoptive family brought him to Los Alamos when he was four days old. Although he graduated from Los Alamos High School and now works as team leader for Plutonium Operations in the Nuclear Materials Technology Division, Fisher maintains his ties to the culture of his birth. He has traveled to Alaska 12 times and worked for a time as a commercial fisherman. He stays in contact with his biological family, who live in Kotlik, a town founded by his ancestors. A former cochair of the American Indian Diversity Working Group, Fisher has displayed his keepsakes, including whalebone sculptures and Eskimo sunglasses, at talks he has given to various groups at the Laboratory.



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