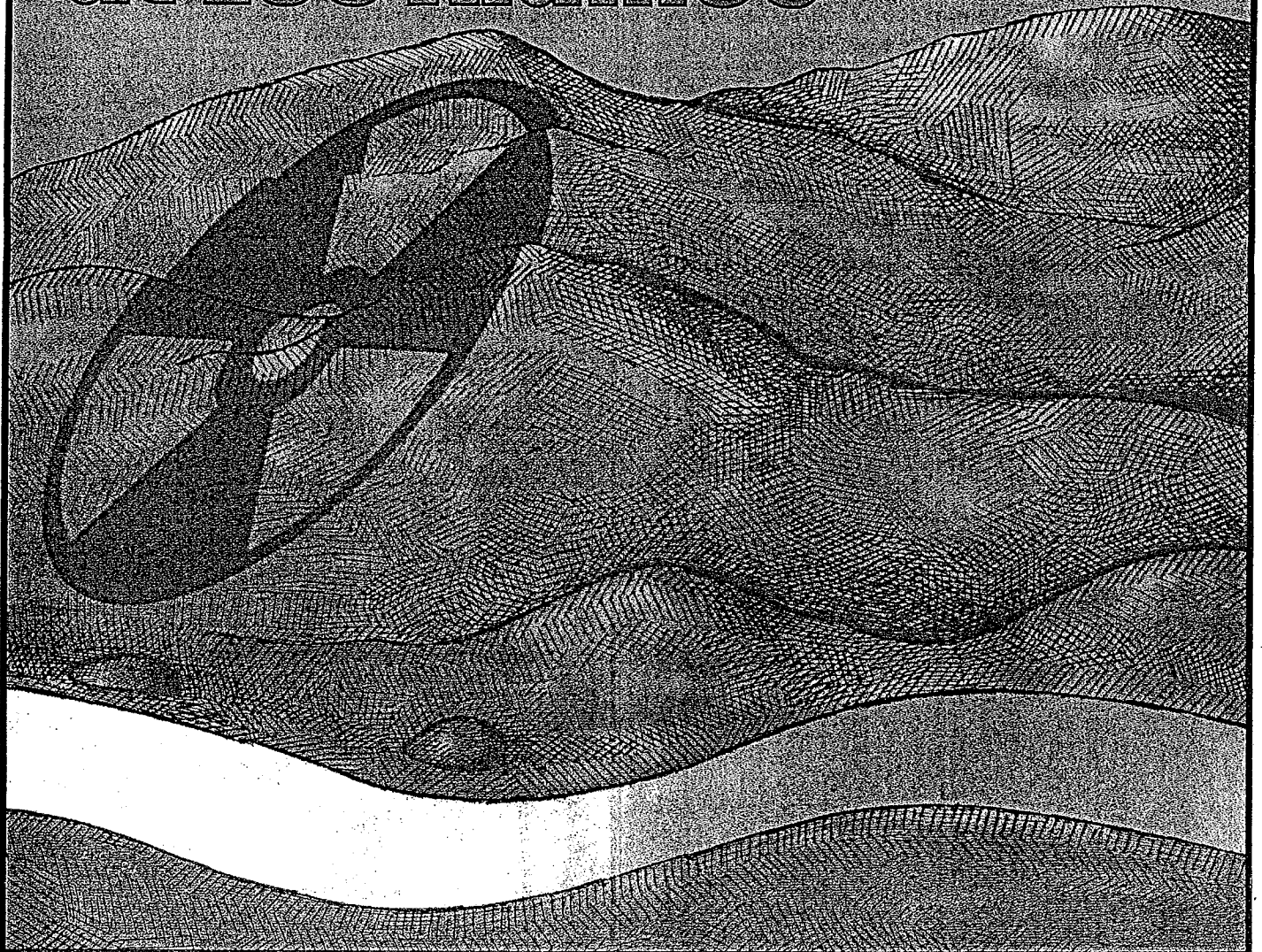


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October 11 - 18, 2001

## The Waste Mess at Los Alamos



**Citizen Kayne: Plumbing,  
peas and vasectomies**

**Reliable Sources: War fever,  
pride and fraud**

**Class Acts: A week  
without violence**

# The Waste Mess at Los Alamos

## What's up there and how it got that way

by Benjamin McLaughlin

In the pre-dawn days of the nuclear age, Ashley Ponds' Los Alamos Ranch School — where, for over 20 years, young boys had gathered to learn the skills and values of ranch life — was forced to close its doors. In its place was built what came to be known as Los Alamos National Laboratory (LANL). Here, the world's first nuclear weapons were created. Dubbed "fat man" (a plutonium bomb) and "little boy" (a uranium bomb) — and developed in Los Alamos under the Manhattan Project — these first two atomic bombs devastated two Japanese cities and ended World War II. The Cold War followed WW II, and as it gained momentum, LANL continued to serve the nation's strategic nuclear needs, ultimately designing over 60 different types of nuclear warheads.

But creating nuclear weaponry means creating nuclear waste. Lots of it. And plenty of this so-called "heritage waste" still sits, hot and toxic, in and around LANL. How to dispose of or store such potentially deadly waste is something that's been chewed over for decades. The recent terrorist attacks in New York and Washington, D.C. have renewed concerns that our nation's nuclear waste needs to be dealt with, quickly, efficiently and securely.

### THE CITY ON THE HILL

Los Alamos is situated northwest of Santa Fe in the Jemez Mountains. The lab sits atop a series of wooded mesas separated by a network of canyons that run through the site and the surrounding area. For years, waste was dumped in several locations on LANL property, sometimes in the canyons themselves. Some of it was just thrown on the ground, some was put in drums and some accumulated in holding ponds. A lot of it, to this day, has not been completely identified.

Determining just how much, and what kind of waste, isn't easy. Some of the waste that's been in storage for decades is unlabeled. LANL simply doesn't know what is in some of their old barrels. What to do with it is another problem altogether. A tiny percentage of LANL's waste has been shipped to the Waste Isolation Pilot Plant (WIPP) near Carlsbad. But LANL has far more waste than WIPP can hold, and most of it is too highly radioactive for WIPP to accept.

In almost all of LANL's operations, some type of hazardous waste is generated, much of it intensely radioactive. All in all, LANL produces about 99 percent of all nuclear waste in New Mexico. Although the facility is known as a nuclear weapons and research lab, there are also degrees of chemical and non-radioactive waste located in many sites

throughout the laboratory. Various explosives testing and storage sites throughout the lab produce much of this chemical waste, which includes different solvents, lead and mercury.

Radioactive waste is categorized in different ways. Under environmental regulations, for instance, transuranic waste, or TRU, is generally generated by working with plutonium. Such waste can contain anything from contaminated machinery to old protective clothing. There is also low level waste, or LLW, which can be roughly defined as anything that can't be classified as TRU. The LLW classification has nothing to do with the level of radioactivity. It includes spent reactor fuel rods and waste from uranium processing. When such waste is mixed with other hazardous, but non-radioactive waste, it is called mixed low level waste, or MLLW.

### DUMPING GROUNDS

The south fork of so-called Acid Canyon was one of the lab's typical dumping sites. Located near



These 1946 lab photos show materials dumping (above) and Acid Canyon (r.) when they were still pouring raw, hot liquid waste onto the ground. photos courtesy of www.lanl.gov



downtown Los Alamos between the city swimming pool and the local skate park, this stretch served as a dump for different types of liquid waste, some of it radioactive, between 1945 and 1966. The waste was mostly dumped straight — meaning it was not in any type of protective container.

A cleanup was performed before the site was transferred to Los Alamos County in 1967, and again about 20 years later. But in 1999, alarming levels of plutonium were discovered in deposits in the canyon. Last May, LANL officials announced at a public meeting that it would perform a partial cleanup of the canyon. They argued that a full cleanup of the site wasn't economically feasible and the scope of the planned cleanup would sufficiently protect the public.

But Joni Arends, a director with Concerned Citizens for

Nuclear Safety (CCNS), a Santa Fe-based environmental activist group, is concerned that a partial cleanup won't fully address the problem and that radiation could one day be carried into the Rio Grande and eventually, further downstream.

"If this isn't cleaned up," says Arends, "it is going to have a profound effect on what ends up in Cochiti dam and in the fish in the Rio Grande."

LANL's main dump site is Technical Area 54, otherwise known as Area G. It's southeast of the lab toward the town of White Rock. Since it originally commenced operations in 1957, Area G has grown to 63 acres — making it larger than WIPP. As of last year, the site had received 10.7 million cubic feet — or about 1.4 million 55-gallon drums — of waste. The lab now plans to add an additional 70 acres to the site.

However, the site is subject to erosion and runoff, says Greg Mello, Director of Los Alamos Study Group, another lab watchdog. In addition, the site has no "cap," or engineered way of stopping erosion or preventing water from getting in, which poses a contamination threat. LANL has proposed ideas such as putting dams in surrounding arroyos, but some worry that anything short of a cap for the site isn't safe.

In addition, points out Mello, Area G, along with other sites containing radioactive waste, is not subject to regulation by any outside agency, such as the New Mexico Environment Department (NMED), the Environmental Protection Agency (EPA) or the Nuclear Regulatory Commission. Because so much of what goes on at Los Alamos is top secret the lab basically answers to itself.

James Bearzi, Chief of NMED's Hazardous Waste Bureau, says that people often misunderstand the role NMED plays in regulating the lab. He points out that NMED's scope of concern is within areas such as ground water quality and hazardous (not radioactive) waste and does not apply to the whole of the lab. Bearzi also adds that "certainly we could do a lot more, but our funding is paltry for what the public expects us to do." He feels that NMED is effective and often cannot inform the public of its plans, because they involve surprise inspections of LANL and other DOE facilities.

### THE CITY IN THE LIME LIGHT

In December of 2000, after two events brought LANL's safety and security systems into question — a forest fire that blazed onto the western edge of the lab's property, and a security scandal involving Wen Ho Lee and lost hard drives — citizens gathered in Santa Fe and Albuquerque to view the premier of the CCNS documentary *Shadow on the Hill*. The movie highlighted LANL's 60-year history and discussed the environmental ramifications of its continued operation. According to CCNS, the documentary's premier had a large turnout and the movie provoked discussion from people



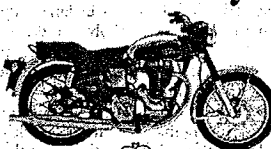
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not normally inclined to talk about the lab. LANL is by no means unaware of the suspicion with which much of the public views it. Concerns about contaminated run-off in the wake of the Cerro Grande fire, and the highly publicized Wen Ho Lee case, drew a lot of attention, much of it negative. Accordingly, LANL has sought to strengthen its image with greater public dialogue. James Rickman, a public outreach director at LANL points out that LANL has also contributed a great deal to Northern New Mexico.

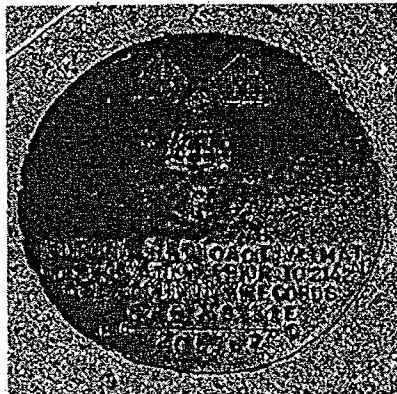
LANL, he points out, is the largest employer in the region, employing 30 percent of the population of Northern New

"People have accused us of not being forthcoming with information," says Rickman. "That's absolutely incorrect." Lab environmental information, he says is available to "anyone, from any organization, at any time." LANL shares that information through public meetings and the Northern New Mexico Citizens Advisory Board, made up of residents of the region, nominated by their municipalities and appointed by the Department of Energy (DOE).

"It's a chance for the public and others to actually have a dialogue with lab officials and be able to ask questions firsthand," says Rickman. LANL hopes that by



An aerial view of Area G — the lab's largest waste dump — shows the steep terrain and dense foliage that make waste cleanup so difficult. photo courtesy www.lasg.org



A radioactive waste disposal site marker in Bayo Canyon proclaims "No excavation prior to 2142 AD." photo courtesy of www.lasg.org

Mexico and 4 percent of the state. LANL's work force consists not only of full-time staff, but also of many subcontracted employees, such as materials specialists, crafts people and security guards. The lab, he said, led a small business initiative that encouraged female- and minority-owned businesses to pursue contracts at LANL.

In fiscal year 2000, salaries for all workers, including those subcontracted, exceeded \$800 million. In the same year, the lab procured a half-a-billion-dollars worth of subcontracted labor. "We've contributed a hell of a lot of money to the New Mexico economy," says Rickman. "And a hell of a lot of jobs."

He also points out that LANL has a long history of environmental monitoring studies that dates back to the 1950s. These studies include air, water and soil sampling as well as how contaminants may move downstream through canyons. The studies are similar to those performed by NMED, and the data collected by LANL is often compared with that taken by the environment department.

providing people with a forum and other measures, concerns over their commitment to the public and its safety will be eased. In fact, much of the statistical ammunition that its critics use to quantify the alarming amount of hazardous and radioactive materials stored at Los Alamos, comes from its own public reports.

#### NEW DIRECTIONS

Although LANL may never get out from under the shadow of the Manhattan Project, it has been forced to make some changes. With the end of the Cold War in the early '90s, LANL's role for the future inevitably came into question. Deployment of nuclear weapons was reduced to the point that LANL — under the auspices of the DOE — was forced to

undergo a round of downsizing. The Stockpile Stewardship Program (SSP), which was inaugurated in 1994, switched the official scope of LANL's, and indeed the entire DOE's nuclear weapons mission, from the development of nuclear weapons to the maintenance of America's aging nuclear stockpile ("Keeping the Bomb Alive," CW, April 8, 1999).

These days, according to Rickman, the lab's main operations involve "reducing the nuclear danger, using science, to ensure the safety and reliability of the nation's nuclear weapons stockpile."

This is the stated purpose of the SSP and involves ensuring that the nation's nuclear stockpile remains reliable in the event that it's needed. This is a difficult task, says Rickman who uses the analogy of maintaining a fire truck that must be kept serviceable without ever actually being started. "We have a keen interest in trying to understand how these weapons age over

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WASTE continued from page 9

time," he says. "And since there's no longer a testing capability, we have to use things like materials science and computer models to try to determine what's happening as they age." Rickman says that every scientific discipline is used in this work.

The lab is also involved in a number of non-nuclear weapons activities such as computer, biological and climate sciences. The lab's participation in these fields is highlighted in a recruiting brochure for the lab, entitled "Science is my Life." The emphasis in such literature is on the diverse scientific community present at LANL, and the role a potential employee can play in that community.

That said, the watchdog groups and

Health Department on projects such as the Acid Canyon cleanup, an audit last year of LANL's compliance with certain environmental regulations, and sampling of the canyons around Los Alamos after the Cerro Grande fire.

Arends believes that LANL could do much more, given its budget growth for weapons-related activities. In 1994, LANL's weapons budget was under \$600 million. The DOE's 2001 budget request for the lab's weapons activities was \$935 million. Further, the current nuclear weapons budget now sits at about twice the Cold War average. But the annual budget for cleanup has stayed the same — at about \$100 million — for the last ten years. "For every dollar spent for weapons," she says, "there should be a dollar spent for cleanup. We can't wait any



Some of the LANL cleanup equipment. Critics say this effort should get as much funding as weapons-related activities. photo courtesy of www.lanl.gov

other lab watchers have little doubt that at least a bit of highly classified weapons and other national security related research continues at the labs. And in fact, the lab's weapons related budget has increased steadily for the past seven years.

### GETTING RID OF THE LEFTOVERS

Cleaning up large amounts of toxic waste is also part of the lab's mandate. But despite the lab's enormous budget, critics say LANL is stingy when it comes to spending money mopping up.

There are a number of watchdog and advocacy groups like CCNS that observe the lab and its growth with concern. CCNS's main focus is primarily on the environmental effects of the country's nuclear weapons industry. It has worked with agencies such as NMED, the EPA, and the New Mexico

longer." Yet according to Rickman, much of the money that is generated for the nuclear weapons budget actually gets allotted to cleanup activities with various weapons work. "You could actually roll environmental restoration activities into the nuclear weapons side of the house," he says.

Nevertheless, "there's enough money in the nuclear weapons business to clean up the mess," says Mello. "It's quite a bit overfunded, and it's going up every year." Mello says there are many people within NMED and at the lab itself who have worked hard at getting LANL to comply with certain environmental regulations, but, "the lab needs more money for cleanup. It can get that money if the state issued clear and enforceable cleanup orders."

Beazi says NMED is doing a better job of listening to the public's concerns. But while the door for greater public involvement and input may be open, it's not always used. "Our experience here in New Mexico is that for many permit requests [by the DOE], we never get any public comment," he says. He stresses a need for more participation from the public and adds that it would greatly help NMED in determining community desires and "give us a sense of how we're doing."

LANL operations continue as advocacy groups and other members of the public keep watch. Concerns about the possible side effects to public health and other matters are likely to continue for years to come. For its part, LANL pledges to continue with what it feels is a good record of responsibility and openness to public concerns. The fact remains that as long as lab operations continue, concerns will arise and people will ask questions. CW

Benjamin McLaughlin is a Santa Fe-based freelance writer.

# Local Nuclear Watchdog Delivers 900 Cans of Food

## Protest Against Lab's Dump Feeds Needy

*Journal Staff Report*

Just in time for Thanksgiving, a local nuclear watchdog group delivered an additional 900 cans of food to the governor's office Wednesday — part of the group's effort to end nuclear waste dumping at Los

Alamos National Laboratory.

Gov. Gary Johnson's staff said the cans of vegetables, pork and beans and other edibles would be delivered to the Food Depot, which provides meals for the needy — after the cans' outer labels are removed and a list of names of people who signed the cans is made.

The cans are wrapped in labels designed to make the cans look like drums of nuclear waste. Also, each label is a letter signed by people

who bought the cans for \$3 each. The letters ask the governor to shut down the lab's nuclear waste dump, known as Area G.

Several weeks ago, members of the Los Alamos Study Group carted a batch of 1,000 of the cans to Johnson's office on the state Capitol's fourth floor.

"We're making sure we get the labels this time," Greg Lewis, director of the state Environment

Department's Water and Waste Management Division, said as the cans were delivered Wednesday.

The study group contends the government is required to place on mailing lists for public comment opportunities the names of the people who signed the can labels. The label letters ask that the signees be placed on such mailing lists, and the study group said failure by the state to make a list of the names would be a violation of the federal Resource

Conservation and Recovery Act.

Greg Mello of the study group previously complained that the state violated the law when it failed to collect names from the first batch of cans.

Lewis said Wednesday that the previous batch of LASG "radioactive waste" labels since have been recovered from the Food Depot and the signees names were recorded.

The lab contends its waste dump

is safe. Critics have maintained that no one really knows what's buried at the dump or what the radioactive garbage will do to the environment.

Also Wednesday, the study group and seven other public-interest groups delivered a letter to state Environment Department Secretary Pete Maggiore urging him to hold public hearings on the department's cleanup plans for the Los Alamos lab in 2002.

# WE APPEAL FOR RESTRAINT

We, the undersigned, extend our deepest sympathy to the victims of the September 11th terrorist attacks. We call on our elected leaders to respond with the utmost wisdom—and restraint—to these acts. We must bring the guilty to justice, but we cannot kill innocent men, women, and children. To do so would betray our deepest values. Such a course of action could very easily draw us into a spiral of violence that would truly destroy our security, undercut our humanity, and damage our democracy far more than could any terrorist act. To lure us into a vengeful response may well have been a goal of the attackers. We must resist this temptation. No terrorist attack from the outside, however severe, can destroy America. Only a betrayal of our core values could do so. For this reason we must also be especially careful to protect the constitutional rights of all Americans—especially Arab-Americans, who are now vulnerable to unwarranted accusation, discrimination or worse. We need to strengthen civil liberties, not abridge them. If we wish to be a truly great democracy, secure from fear, we must have the courage to lead the world in the paths of justice, not those of violence.

These 306 individuals do not include 3,062 individual and organizational signatories listed in the previous four full-page ads. Names with asterisks contributed to this ad; names in bold are major contributors. If there are enough additional signatories, we will include them future ads. We apologize if your name was inadvertently mistranscribed or omitted.

Volunteers, including many people we had never met before, have collected most of these signatures. They represent a spontaneous outpouring of concern.

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## THE SILENT MAJORITY?

Of individuals from 37 countries polled by Gallup International on September 19, majorities in only the U.S., Israel, and India favored launching a military attack, over extradition of the terrorists to stand trial. Clearly, the majority of people in the countries polled strongly favored a law enforcement approach to the hideous crimes of September 11. Given an alternative, only 54% of Americans polled favored military action over criminal proceedings.

*"In your opinion, once the identity of the terrorists is known, should the American government launch a military attack on the country or countries where the terrorists are based or should the American government seek to extradite the terrorists to stand trial?"*

Country	Should launch attack %	Should extradite terrorists %	Don't know/No answer %	Country	Should launch attack %	Should extradite terrorists %	Don't know/No answer %
Argentina	8	84	8	Lithuania	15	83	2
Austria	10	82	8	Luxembourg	18	78	4
Bosnia	14	80	6	Mexico	2	94	3
Bulgaria	19	66	15	Netherlands	28	68	4
Colombia	11	85	4	Norway	12	83	5
Croatia	8	82	10	Pakistan	9	69	22
Czech Republic	22	64	14	Panama	16	80	4
Denmark	20	74	6	Peru	8	89	3
Ecuador	10	83	7	Portugal	18	75	8
Estonia	10	87	3	Romania	18	78	4
Finland	14	82	4	South Africa	18	75	7
France	29	67	4	Spain	12	86	2
Germany	17	77	6	Switzerland	8	87	5
Greece	6	88	6	UK excl. NI	18	75	7
India	72	28	0	Ukraine	8	84	8
Israel	77	19	4	USA	54	30	16
Italy	21	71	8	Venezuela	11	86	3
Korea	38	54	9	Zimbabwe	11	84	5

## Response from Our Congressional Delegation

The Study Group has taken this petition, with more than 3,000 signatories, to Congressman Udall and to senators Bingaman and Domenici. With these petitions, we, along with many others, requested that our congressional delegation conduct public forums at which security issues could be explored prior to committing the United States to additional acts of violence. Congressman Udall held a meeting on Friday, 9/28, at 11:30 am, during which a variety of thoughtful perspectives were offered by constituents. From our senators, however, there has been no response whatsoever—neither a substan-

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Harold Brauer  
Dennis H. Bryan  
Constance Buck  
J. Burch  
Clifford Burke  
Annie Campbell  
George Campbell  
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Christa Laos  
Alison Lasky  
Diane Laurent  
Vera Lawrence

Korea	38	54	9	Zimbabwe	11	84	5
Latvia	21	64	15				

[www.gallup-international.com/terrorismpoll\\_figures.htm](http://www.gallup-international.com/terrorismpoll_figures.htm)

This response stands in apparent contrast to the "88%" of Americans who, according to an October 11-14 Gallup Organization poll, favor direct military action in Afghanistan. Like many such polls reported in recent news, this poll excluded any response to the terrorist attacks other than war.

Robert and Helen  
Lang  
L.F. Lashbaugh  
Ellen Lowenburg  
Michael Lujan  
Mitra Lujan  
Rae Lunden

Lisa Manis  
Debraanna Mansini  
Althea Maravelas  
Janeen Marie  
Cheryl Martin  
Cory Martin  
Fran Martin

Ryley McWilliams  
Julia Meeks  
Michelle Metcalf  
Clay Meyer  
Devin Miller  
Judy Miller  
Natalie Miller

Clive and Christine  
Moon  
Virginia Mudd  
Nuab Murphy  
Linda Murray  
S. Murray  
Scott Murray

Fran Nelson  
Gail Newbury  
Sara Nordangard  
Cindy O'Connell  
Maggie Odell  
Karen Ollige  
Jane Omara

T.J. and Rebecca  
Shankland  
Christina Simek  
Caitell Sonum  
Juanita Souza  
Virginia Stafford  
Shauna A. Star  
Jay Starman  
Eitan Sitrin  
Amanda Strother  
Karen Sturrock  
Lynne Taccotina  
Donna  
Thibodeaux  
Jean M.  
Thiemeyer  
Jessica Tward  
Mollie S. Toll  
Josef Towner  
Copper Trainor  
Electra Tropaloc

whatsoever—neither a substantive reply on the issues nor any meetings with citizens.  
Our two senators did, however, respond to other constituents. On 9/25, they offered a floor amendment aimed at increasing U.S. nuclear weapon spending by some \$339 million for this coming fiscal year. This last-minute amendment was offered after the Senate had completed its actions on this year's nuclear weapons budget. It was withdrawn after protest by other senators.



On October 12, the U.N. High Commissioner for Human Rights, Mary Robinson, called for a suspension of attacks against Afghanistan so desperately-needed humanitarian aid could reach hundreds of thousands of civilians before winter sets in, warning that they would otherwise freeze or starve to death. Will our congressional delegation endorse this urgent call for help?

*If you would like to sign this petition, additional signatures are still being gathered for presentation to our elected officials here and in Washington D.C., as well as for publication in future ads. Petitions are available for distribution at [www.lasg.org](http://www.lasg.org). We welcome your contribution toward these ads. Thanks to all who have helped so far!*

*The choice is not between violence and nonviolence,  
but between nonviolence and nonexistence.*

—DR. MARTIN LUTHER KING

For most of the past decade, the Los Alamos Study Group has been working to abolish weapons of mass destruction, especially nuclear

weapons, in compliance with U.S. treaty commitments. In the process, we have also worked to protect our environment from these weapons'

permanently-toxic wastes, and to clean up contaminated areas where possible.

We invite you to join us.

For more information about the Study Group, to sign the petition, or to help pay for this and future ads, contact:  
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212 East Marcy, Suite 10, Santa Fe, NM 87501 • 505-982-7747 • [info@lasg.org](mailto:info@lasg.org) • [www.lasg.org](http://www.lasg.org)

Paper: Tri-Valley Herald (Pleasanton, CA)

*Associated Press*

Title: Watchdog urges nuclear storage ban - Proposal would mean moving Livermore lab out of state

Author: Lisa Friedman WASHINGTON BUREAU

Date: October 21, 2001

Section: Local

WASHINGTON -- Should a bustling urban area like the East Bay play host to several hundred pounds of uranium, plutonium and other ingredients of nuclear weapons? Nuclear accountability advocates say no.

At least one group is pressuring the federal government to eliminate weapons-grade nuclear materials from Northern California -- an act that would mean closing the doors at Lawrence Livermore National Laboratory.

The notion of closing Livermore, consolidating its programs with its sister lab in Los Alamos and moving the entire operation to the more sparsely populated New Mexico region, is not new.

The future of the U.S. nuclear laboratories has been in question ever since the end of the Cold War, with various consolidation proposals shot down by the White House, lab leaders and their representatives in Congress.

But when the government watchdog group Project on Government Accountability (POGO) revived the idea this month after exposing alleged vulnerabilities in the Department of Energy's nuclear bomb complex, it set off a new round of debate.

Rep. Ellen Tauscher, D-Alamo, whose district includes Livermore lab and its 8,000 employees, said the government must think "boldly" about new ways to protect its citizens in the post-Sept. 11 world.

But, she said, "That does not include consolidating the national labs. If we've learned anything from Sept. 11, it's that having concentrated nodes of information, authority and expertise is the last thing we want to do.

While this (consolidation) perhaps sounds good on paper, in this very new world we need to make sure we are not hurting ourselves," Tauscher said.

Others argue that closing down labs and consolidating potential deadly nuclear sites -- several of which are planted near major metropolitan regions -- is the government's only responsible course of action.

An eight-month investigation by POGO released last month alleged that the Department of Energy's nuclear facilities are vulnerable to terrorist attacks. The group assailed DOE for maintaining enough weapons-grade plutonium and highly-enriched uranium to create nuclear devices, and for keeping the materials near urban areas like Livermore, Denver and Knoxville, Tenn.

A detonation at any one of the 10 major government sites containing nuclear substances "would dwarf the impacts of Chernobyl," POGO argued. The group called for a series of measures, like shutting down the Idaho National Engineering Lab and the Argonne National Laboratory in Illinois.

The report also proposed combining Livermore and Los Alamos, saying "we don't need two redundant bomb design labs. Livermore is now in the middle of a highly populated community, yet large amounts of plutonium are stored there."

"Certainly the United States doesn't need two weapons labs," said Bob Schaeffer, public education director with the Alliance for Nuclear Accountability, a Washington-based advocacy group.



The U.S. nuclear weapons complex includes Livermore, Los Alamos and Sandia National Laboratory also in New Mexico. Sandia scientists work primarily with the non-nuclear aspects of warheads, while Livermore and Los Alamos focus on the nuclear physics.

Like many anti-nuke activists, Schaeffer questions whether the government should be dealing in nuclear materials at all, saying two labs are "only slightly less risky than one."

"There is no good place for this stuff," he said.

In recent weeks, Rep. Chris Shays, R-Conn., chairman of the House Government Oversight Committee, announced he will launch an investigation into alleged security weaknesses at Department of Energy nuclear facilities.

The scope of the investigation is not yet clear. Neither are congressional leaders sure whether the probe will examine the possibility of combining the nuclear weapons design labs.

Livermore spokeswoman Lynda Seaver declined to discuss the idea of consolidation.

"It's just speculation right now, so we wouldn't want to comment on something like that," she said.

But even those who want to see nuclear weapons eliminated from Northern California aren't holding their breath.

The nuclear weapons people have got themselves long-term jobs and shouldn't worry," said Dr. Argun Makhijani, director of the Institute for Energy and Environmental Research, a watchdog group based in Washington.

No one questions nuclear weapons much, and as a result no one talks about consolidation," added Greg Mello, director of the **Los Alamos Study Group** in New Mexico.

No one in Congress is thinking about this."

The last time Congress did think about it was in 1995 when former Energy Secretary Hazel O'Leary formed a task force to look at the future of the labs.

The Galvin Commission -- named for its chair, Motorola CEO Robert Galvin -- called for transferring weapon design from Livermore to Los Alamos and Sandia National Laboratory over a period of five years.

The task force did not propose closing Livermore entirely. Rather, it said the lab should maintain enough design technology to continue working in nuclear non-proliferation.

But the idea of taking away Livermore's nuclear weapons stockpile was deeply threatening to the lab, said Chris Paine, a senior researcher and nuclear lab expert with the National Resources Defense Council in Washington.

It was taking the golden eggs away from the goose," he said. "Livermore fought very hard to keep that from happening."

Lab advocates say rightly so.

Sidney Drell, a Stanford University physics professor and a consultant to Livermore labs, argued against the Galvin report and continues to believe that two labs are better than one.

The biggest advantage is what Drell refers to as "peer review," having independent scientists constantly looking over one's shoulders to check and double check their work.

It's not much different than the usual idea we have of checks and balances throughout the government," agreed Raymond Jeanloz, professor of geophysics at University of California at Berkeley and also a Livermore consultant.

Having two labs with different approaches to weapons design "brings out the best in both sides, creativity and the pressure to excel ... They know there's another group out there that's going to be challenging everything they do," he said.

Ultimately the recommendations from the Galvin Report went nowhere after President Clinton in late 1995 advocated a status quo approach to the laboratory issues -- possibly to win the labs' support for the Comprehensive Nuclear Test Ban Treaty.

But the underlying reason for promoting consolidation -- the theory that Livermore and Los Alamos are redundant -- still exists. Even lab champions acknowledge its truth.

There's a lot of overlap. In a sense, there's almost complete overlap in their mission," said Jeanloz.

But congressional leaders like Tauscher maintain that's a good thing. Unless, of course, someone comes up with a proposal to move the Los Alamos operations to Livermore, beefing up the California lab's \$906 million annual budget.

I'd be in favor of moving the New Mexico labs to California," joked Tauscher.

Nuclear watchdogs don't find parochial jockeying funny and think it's part of the problem -- one the Sept. 11 attacks won't change.

It's the mindset that leads Congress members to say economize, but don't close the military base in my district, Schaeffer said.

Author: Lisa Friedman WASHINGTON BUREAU

Section: Local

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# Lab studies the tiniest of weapons: the germ

10/23/01

By **DEBORAH BAKER**  
The Associated Press

LOS ALAMOS — The government laboratory on this remote mesa earned its reputation as a nuclear-weapons facility, the birthplace of the bomb.

A lesser-known mission has it studying another sort of weaponry: germs.

For nearly a decade, Los Alamos National Laboratory has been developing the molecular tools to identify and pinpoint the origin of disease-causing organisms.

It has focused mostly on anthrax — or, more properly, *Bacillus anthracis*.

"Anthrax is the disease," explained biophysicist Jill Trehwella, who oversees the program. "Anthraxis is the organism."

The identification of biological agents, whether they occur naturally or as a result of bioterror, can be crucial to saving lives.

The Los Alamos project gets about \$10 million annually — a fraction of the lab's \$1.4 billion budget — from the Department of Energy's Chemical and Biological National Security Program.

Years of work by researchers at sites including Los Alamos, Northern Arizona University and Louisiana State University has created the world's biggest bank of genetic information on *Bacillus anthracis*.

Scientists can identify the origins of organisms based on the information in the DNA.

"What it does is allows you to take an unknown sample that comes in and look at the particular aspects of its genome, and — if they match the information in the database — you can say, 'Ah, this matches the dead cow in Minnesota.' Or, 'This is a laboratory strain that is used widely in research.' Or, 'This is a vaccination strain that couldn't hurt anybody,'" Trehwella said.

Researchers also can figure out whether the organism has been genetically modified.

"It's a forensic analysis — helps you find the bad guy or helps you find if it's natural or not," Trehwella said.

Trehwella says the lab's expertise has been used to investigate, years after the fact, a 1979 anthrax outbreak in the former Soviet Union; help United Nations weapons inspectors in Iraq; and trace a mid-1990s outbreak in Australia to 145-year-old anthrax spores from buried cattle that had been imported from India.

Officials are mum about whether that capability has given the Los Alamos lab any role in the investigation of the East Coast anthrax scare.

"We would never comment on an ongoing investigation," said Trehwella, citing the criminal nature of the probe.

Jittery about making its employees a target of terrorism, the lab has clamped down on contacts with its researchers, funneling information instead through Trehwella, a 17-year lab veteran and head of its 2-year-old Bioscience Division.

Secrecy is nothing new in Los Alamos, where the Manhattan Project developed the world's first atomic bombs. The city that grew

Please see **GERMS**, Page B-4

# GERMS

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Continued from Page B-1

from a wire-fenced Army encampment at the end of a winding dirt road was not even open to the public until 1957.

Trewhella says the laboratory's interest in the biological sciences is a natural outgrowth of its efforts to understand the impact of radiation on the human body.

The researchers who study anthrax and other pathogens — including other members of the bacillus family, as well as *Yersinia pestis*, which causes plague — comprise about 20 percent of the Bioscience Division, which has the equivalent of about 200 full-time employees, according to Trewhella.

All told, about 14,000 people work at the lab, including contractors, security guards and other support personnel.

The Los Alamos laboratory does not work with anthrax-causing organisms.

Instead, the laboratory uses in its research the less dangerous vaccine or research strains.

But Trewhella says being able to work with "small amounts of live, virulent

*Biophysicist Jill Trewhella, who oversees the program, says being able to work with "small amounts of live, virulent agent" would improve its research capabilities, and her division proposes to build a biosafety level 3 (BSL-3) laboratory that would handle infectious organisms.*

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Her division proposes to build a biosafety level 3 (BSL-3) laboratory that would handle infectious organisms.

An environmental assessment of the proposal, required before the lab and the Department of Energy decide whether to proceed, is under way.

The proposal has been criticized by watchdog groups that say the facility is unnecessary — because the same work is already done at other labs — and potentially dangerous.

Locating a biowarfare

facility at a weapons laboratory sends the wrong signal to other nations, they also contend.

"What Los Alamos wants to do is what could best be characterized as defensive biowarfare research," said Greg Mello, director of the Los Alamos Study Group. "We think it's very important to separate those functions from the offensive warfare research which is going on all around it."

He worries that the BSL-3 proposal is "meant to be the leading edge of a very large biology program at Los Alamos — and it's the proverbial nose of the camel."

# Los Alamos Lab wants to take germ research to another level

By Deborah Baker 10-23-01  
THE ASSOCIATED PRESS

LOS ALAMOS — The government laboratory on this remote mesa earned its reputation as a nuclear weapons facility, the birthplace of the bomb.

A lesser-known mission has it studying another sort of weaponry: germs.

For nearly a decade, Los Alamos National Laboratory has been developing the molecular tools to identify and pinpoint the origin of disease-causing organisms.

With recent bioterrorism scares across the country, the lab is now proposing to take its research another step forward — to do work with live organisms in addition to the work it has done with attenuated cells, the dead organisms used to create vaccines.

The proposal, which includes

building a level-3 biosafety facility, has alarmed a local watchdog group.

The lab's work to date has focused mostly on the headline-grabbing disease anthrax — or, more properly, *Bacillus anthracis*.

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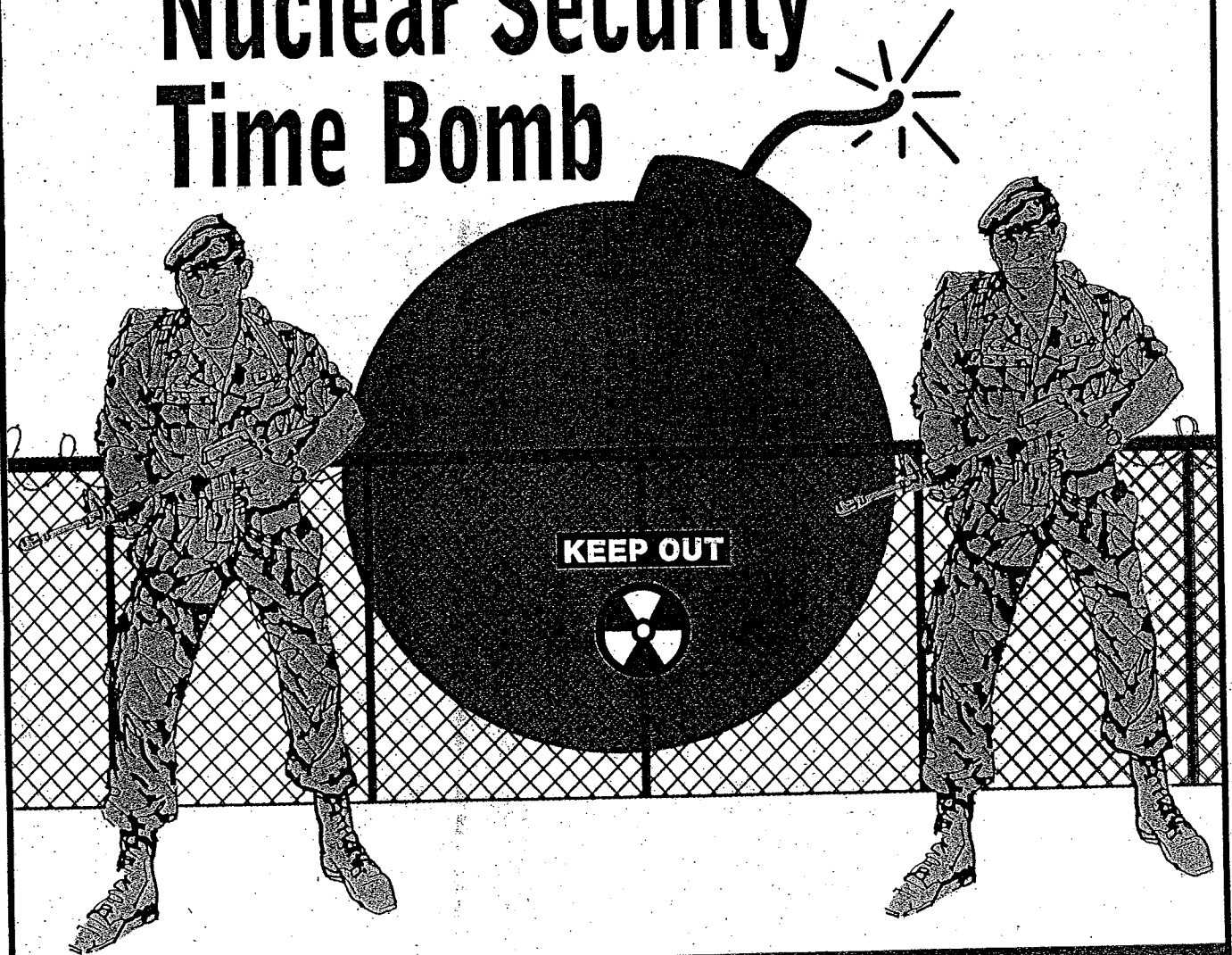
# CROSSWINDS

Weekly

Albuquerque ★ Santa Fe

October 25 - November 1, 2001

## Our National Labs' Nuclear Security Time Bomb



**Class Acts:** an affirmation  
of peace and tolerance

**Citizen Kayne:** Shrines to  
the American Dream

**Mexico Diary:** Hit hard  
by September 11

# Our national labs' security time bomb

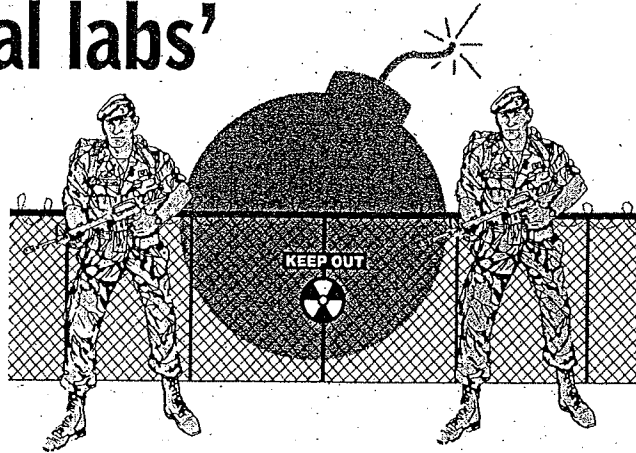
by Kristen Davenport

It's nearing dusk at Los Alamos National Laboratory. Behind barbed-wire fences deep in Pajarito Canyon at Technical Area 18 sits large quantities of weapons-grade plutonium and depleted uranium. A few guards with machine guns mill about.

Suddenly, from the canyon ridge, there is gunfire. Los Alamos guards down in the canyon bottom start dropping, killed by sniper fire. A group of unknown men rush into area, bringing with them a wheelbarrow purchased from Home Depot.

Within an hour, dozens are dead and the terrorists escape with enough plutonium and uranium — hauled in the garden cart — to build several nuclear bombs. Free and clear.

Fantasy?



based near Washington, D.C., released a report in early October that finds that in about 50 percent of mock raids (the exact percentage is classified) the nuclear facilities fail to protect radioactive materials and weapons secrets.

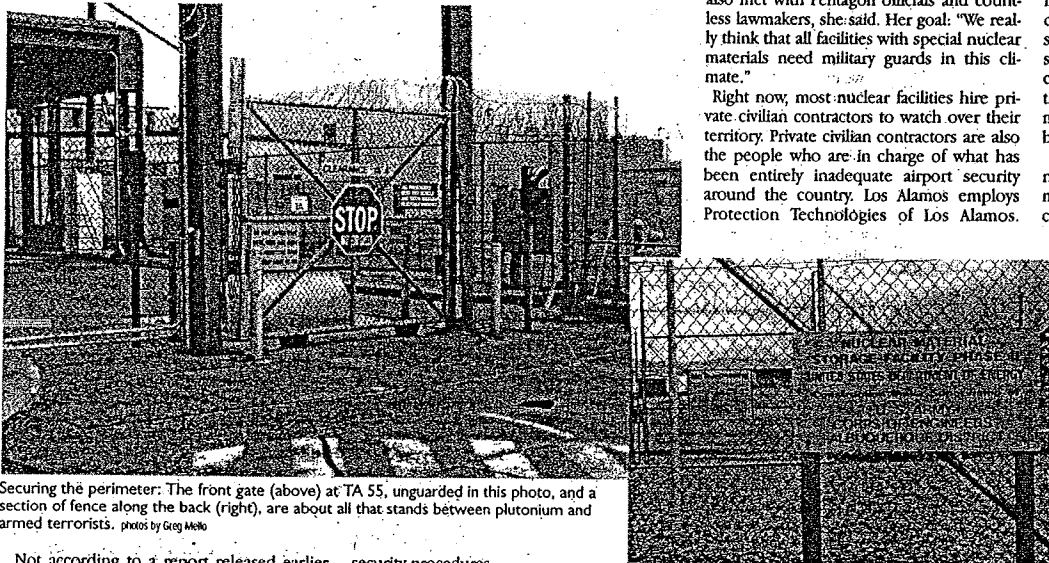
The report also details cases of Department employees who have tried to expose the energy department facilities' lack of security, the so-called "whistle blowers" who DOE allegedly retaliated against. It blames bureaucratic arrogance and reluctance to change

taking it more seriously" than previous reports criticizing security at the nation's nuclear facilities. In response, Congressman Chris Shays, R-Conn., has requested the first congressional oversight investigation into Department of Energy security in a decade.

POGO had planned to release the 200-page report this month and had been working on the document for eight months.

"The timing was just an eerie thing," Brian said. The day after the terrorist attacks, the group immediately took the document to the National Security Council. The group has also met with Pentagon officials and countless lawmakers, she said. Her goal: "We really think that all facilities with special nuclear materials need military guards in this climate."

Right now, most nuclear facilities hire private civilian contractors to watch over their territory. Private civilian contractors are also the people who are in charge of what has been entirely inadequate airport security around the country. Los Alamos employs Protection Technologies of Los Alamos.



Securing the perimeter: The front gate (above) at TA 55, unguarded in this photo, and a section of fence along the back (right), are about all that stands between plutonium and armed terrorists. Photos by Greg Mello

Not according to a report released earlier this month from a government watchdog group. In fact, when this scenario was played out by U.S. special military forces at Los Alamos Technical Area 18 about one year ago, the terrorists did indeed get away with the plutonium.

Sometimes under cover of darkness, sometimes in broad daylight, special U.S. military forces have for years stormed America's nuclear facilities to mimic terrorist attacks.

The questions: Are the nation's nuclear facilities — including New Mexico's own LANL and Sandia National Laboratories — prepared for (possibly inevitable) terrorism? Could a small band of rogue terrorists steal enough radioactive material to build a bomb? Could a terrorist truck carrying bombs slam through fences and explode next to a storage area for plutonium or depleted uranium?

The answers, as revealed by a report earlier this month, are frightening.

In many cases in which mock terrorist scenarios were played out, the terrorists won.

The Project on Government Oversight (POGO), a non-government watchdog group

security procedures.

Spokesmen for LANL say the report is overwritten, exaggerated and inflammatory. The mock exercises are just that, they say — exercises — and no one "wins" or "loses."

"We consider all our exercises to be successful because we learn from them," says Kevin Roark, a spokesman for the lab. "We think the report is inaccurate."

## EERIE TIMING

For years experts have said it's very unlikely terrorists would attack a nuclear facility — because of high security — when there are so many other easier targets. But until Sept. 11, experts would have said the chances of two hijacked airplanes flying into New York City skyscrapers was almost nil, as well.

The POGO report has received some attention in various newspapers nationwide in the aftermath of the Sept. 11 disaster, although POGO director Danielle Brian says no one seems eager to act on her organization's report.

Just the same, Brian said, "policy makers are

Rocky Flats, a facility in Denver which also receives heavy criticism from the POGO report, has hired Wackenhut for protective forces, the same company that runs problem-plagued prisons in New Mexico and other states.

The POGO report lists 10 facilities across the United States where enough weapons-grade plutonium and uranium are stored to construct a nuclear bomb. Many of the ten sites vulnerable to attack have large numbers of people in the near vicinity. Los Alamos is on the list, along with Sandia National Laboratories in Albuquerque. (The 2,400 nuclear weapons stored on Kirtland Air Force Base are not mentioned in the report as a problem, because the bombs are stored deep underground.)

And, the report points to another soft underbelly for America's nuclear programs that might concern New Mexicans: trucks out on highways (without police escort) carrying contaminated radioactive materials to storage sites such as the Waste Isolation Pilot Plant

down by Carlsbad.

"Over the last several years," the POGO report states, "there have been exercises testing the security [of shipments] ... where the DOE security force failed to protect nuclear cargo because they had inadequate weapons and insufficient numbers, as well as poorly conceived tactics. Due to these insufficiencies, the protective forces were defeated in six out of seven exercises in December 1998."

## WARTIME PRECAUTIONS

In the hours and days after the Sept. 11 terrorist attacks, all shipments of nuclear materials halted — and have been stopped off-and-on in the six weeks since the attack. Also, all nuclear facilities went onto high alert known as SECON 2 — just one step below full-blown wartime attack.

As part of that, Pajarito Road — the artery that runs straight down the middle of LANL's 23,000 acre chunk of land — was closed at both ends. Closing Pajarito Road permanently has been suggested by numerous officials and politicians over the last decade when security issues come up.

Pajarito runs right by two technical areas at the lab — TA 18 and TA 55 — which probably contain the highest concentrations of nuclear materials on lab property. TA 18, deep in Pajarito Canyon, has been the site of two failed security raids — one in 1997 and another in October 2000 — the POGO report detailed. Some long-term vision documents for the laboratory suggest the road should be permanently closed down.

The lab, however, doesn't want to cut off Pajarito Road because thousands of lab employees use the artery to get to work. It would be inconvenient. The problem highlights what many experts say is the essential conflict at most nuclear facilities: The need to satisfy scientists who don't want too many strictures often requires measures that are contrary to national security needs. If scientists start feeling like nuclear soldiers, they might go work somewhere else, taking their brainpower with them.

Instead, the lab and DOE are looking right now at another option for TA 18, which former Energy Secretary Bill Richardson has said could be the most vulnerable nuclear site in the country. Because the facility, which houses nuclear-critical machines, sits deep in a canyon, it is nearly indefensible. A group of terrorists could easily guard the road into the site, picking off military or police forces who came to the rescue of others at the facility.

DOE held several public meetings this month to discuss the plan to move TA 18. The most desirable option for LANL is to build an underground bunker at TA 55 (right across the road, but up on a plateau), although other options include moving the entire project to Nevada.

But even if the plans sail through, the bureaucratic necessities — such as an Environmental Impact Statement — the move of the nuclear materials wouldn't be complete until 2007, said Jay Rose, a DOE specialist working on the move of TA 18.

## FRIENDLY FIRE

The POGO report uses several case studies to illustrate the failures of nuclear facilities, during mock raids. Mock scenarios at Sandia are not mentioned, but failures at Los Alamos are targeted, as well as problems at Rocky Flats.

One particularly gruesome scenario played out at Rocky Flats near Denver, where tens of tons of plutonium and uranium are stored. (The energy department is slowly shutting down the site, sending most of the materials to other DOE facilities.) The facility had received several negative security reports and marginal mock raids in the late '90s. In March of 2000, during mock exercises in which terrorists tried to steal plutonium, Navy SEAL forces acting as terrorists "found an alarming trend," the report notes.

"The [Rocky Flats] protective forces were 'shooting' [with laser guns] everyone in sight — mock terrorists, scientists, controllers

wearing orange safety vests, and each other," the report states. "The rules of deadly force [which say security should kill the bad guys, not the good guys] were completely abandoned to pass the tests and prove the facility is 'low risk.'"

During previous exercises at Rocky Flats, Navy SEALs had managed to break through fences, steal materials, plant truck bombs, and otherwise endanger the citizens of Colorado, POGO reports.

At Los Alamos, most of the attention is focused on TA 18 where the pseudo-terrorists carried away plutonium and uranium in the Home Depot wheelbarrow. In 1997, a special unit of the U.S.

DOE's "ability to fend off systemic change."

The General Accounting Office, the performance auditing branch of the federal government, has issued many critical reports on DOE security.

Going as far back as 1981, the president's

levels: Satisfactory, marginal, or unsatisfactory.)

But according to documents, after the report made its way up the chain of DOE command, the facility was instead given a "marginal" rating.

### DEFINING 'SECURE'

Los Alamos defends itself, saying the POGO report repeatedly tells the horror stories and neglects the lab's successes and that the report misrepresents the outcome of the two "failures" in 1997 and 2000. Roark says LANL also conducts its own mock security scenarios without the help of special military

nature. Much of it was based on how security is evaluated, not on security itself."

POGO director Brian says the organization works hard to maintain a non-partisan approach to its studies. However, one of the authors of the recent security report, Peter Stockton, was assistant secretary to Democrat Richardson, former Secretary of Energy and likely New Mexico gubernatorial candidate.

The organization, which has been around for 20 years, has focused much of its energy on defense issues in recent years, although this was its first report looking at security. And for the time being, Brian said, everything else has been abandoned.

"Security is not a theoretical problem anymore," she says. "So we're putting all our focus on getting results from this report. The country isn't interested in anything else."

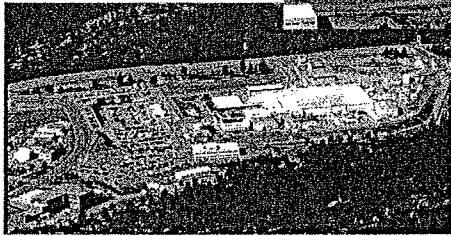
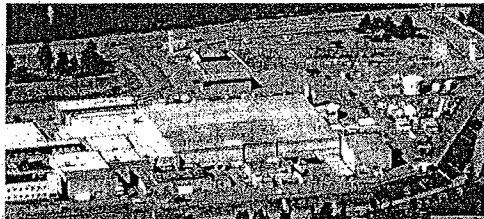
Brian wants Congress and DOE to look at some quick solutions — consolidating nuclear materials at secure underground sites, employing trained military people to guard plutonium and secrets.

"I spent [Thursday] morning talking with high-level people at the Department of Energy who say they're spending more time thinking about how to change the way we do things," Brian said. "But the problem is, the longer we go from the shock of the [Sept. 11] event, the less likely we are to see change."

Officials with the Department of Energy and the National

Nuclear Security Agency, a semi-autonomous organization tied to the DOE that oversees security, have refused to comment on the report and did not return phone calls for this article.

The entire report can be viewed at [www.pogo.org](http://www.pogo.org). CW



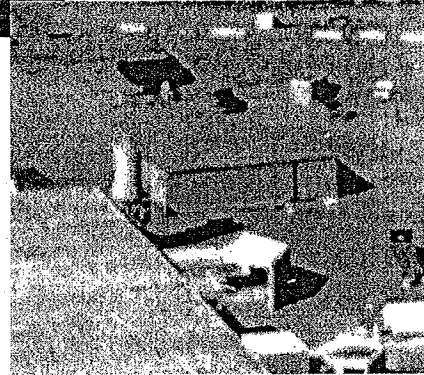
Three aerial photos of TA 55, show Building 185 where, according to the Los Alamos Study Group, LANL transferred up to 20 kg of Pu-239 without the DOE's knowledge. photos by Greg Mello

Office of Safeguards and Security found substantial weaknesses in DOE security, including a report by Representative John Dingell, D-MI. The same office in 1996 produced another negative report under the leadership of Edward McCallum, a former colonel in the special forces in Vietnam, when McCallum was working for the Department of Energy.

After the report, McCallum was placed on administrative leave amid allegations of retaliation. (McCallum now works for the Pentagon.)

McCallum's report and others often detail what some say is a hostile attitude toward security issues among leaders of the nuclear weapons complex. As the Dingell report noted, "In every investigation concerning problems at the DOE weapons facilities and laboratories, the individuals responsible for the operation of defense programs consistently and repeatedly denied the problems, punished the whistle blowers, and covered up the problems to their superiors and Congress."

For instance, the POGO document notes, in 1998, the energy department's Albuquerque Operations Office went to Los Alamos to review security procedures there. Largely because of problems at TA 18, LANL was initially given an "unsatisfactory" rating. (DOE's security ratings system has only three



Army Special Forces staged the attack, but the rules required that their objective was to "steal" more nuclear materials than one person could carry; hence the wheelbarrow.

As the *Wall Street Journal* reported, "The Garden Cart attackers ... used snipers hidden in the hills to 'kill' the first guards who arrived. Because they happened to be the commanders of the guard force, the rest of the force was thrown into disarray."

The terrorists made it out.

### HISTORICAL PROBLEMS

The POGO report is not the first document to detail security lapses at nuclear weapons facilities. Just two years ago, former Senator Warren Rudman, R-N.H., was asked by a Clinton administration official to produce a review of DOE security. Rudman's results: "This report finds DOE's performance, throughout its history, should have been regarded as intolerable."

Rudman blamed "institutional hubris" and

units, which also isn't mentioned in the recent document.

Says Roark, "We don't measure the success or failure of an exercise based strictly on the win/lose scenario. Sometimes your force repels that attack. Sometimes your force doesn't. Everyone in the security business knows this is true. The report ignores dozens of others that don't fall neatly into the category of 'losers' and misrepresents our security as porous."

And while the report comes down hard on security problems at TA 18, Roark said, it neglects to mention that moving the facility to a safer location was the lab's own idea.

"There are some years when our security has been labeled as 'marginal,'" Roark says. "But if you look at the details of those situations, the problems were administrative in

## And if that weren't scary enough ...

### Other aspects of the global and domestic nuke threat

There is apparently enough lost, black market, and none-too-secure weapons-grade uranium floating around the world to give international military and security experts the shakes. And that doesn't count the thousands of spent fuel rods, packed with extremely hazardous uranium, sitting in pools of water awaiting disposal, all over this country.

The potentially lethal scenarios — now that suicide attacks have been established as a workable terrorist tactic in this country — are numerous.

According to the *Wall Street Journal*, in an Oct. 17 front page story headlined, "Suddenly, Small Gaps in Nuclear Security Look Like Chasms," there is little doubt that Osama bin Laden has tried to get his hands on nuclear weapons and the uranium to make them.

A device like the one dropped on Hiroshima could be fashioned from 125 pounds or less of the right uranium and conventional explosives. The design is so well known and regarded as so reliable, the *Journal* story said, "it doesn't even have to be tested." Such a device would produce an explosion equivalent to 15,000 tons of TNT and could kill more than 100,000 people if exploded in or near a major city. For contrast, the World Trade Center attack and collapse, according to the *Journal*, released the equivalent of an explosion of 1,000 tons of TNT.

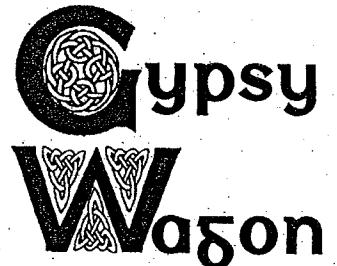
Unfortunately, since the former Soviet Union disintegrated, the Russians have been far from concerned about securing their weapons, including nuclear-tipped missiles, and uranium stockpiles. The United States is now contemplating foreign aid that would help the Russians improve their nuclear security.

Equally unsettling, according to the *Journal*, the Russians apparently designed and built an undetermined number of so-called "suitcase" nuclear devices in the early and late 1980s. No one, including the Russian government, seems able to say where these are.

In any case, it would apparently be a fairly simple matter to smuggle an atomic bomb or suitcase nuclear device into the U.S. in spite of our allegedly now-heightened security. The preferred method would likely be by ship since some nine-million shipping containers, each the size of a semi-truck trailer (20 to 40 feet long) come into this country each year. Customs inspectors at our major ports are entirely overwhelmed by this traffic and unable to inspect them except in a cursory way.

Just as chilling is the possibility that terrorists might choose to raid one of our dozens of operating nuclear plants, most likely close to a major city like the Indian Point complex less than 30 miles north of Manhattan on the Hudson River. Any of those plants and their pools of spent fuel rods could be converted, with well-placed explosives, into "a giant radiation dispersal device," as the *Wall Street Journal* termed it. Further, just as our weapons labs have dismally failed to fend off staged, terrorist attacks, so too, mock attacks on our nuclear power plants have been equally successful.

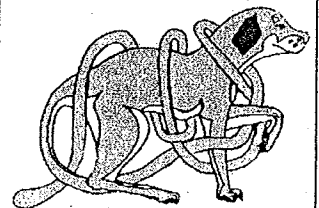
—Steve Lawrence



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## BIOTERRORISM

# LANL Bioscience Division studies germ weaponry

◆ *Central role in identifying anthrax has historic roots*

By DEBORAH BAKER  
Associated Press Writer

LOS ALAMOS — The government laboratory on this remote mesa earned its reputation as a nuclear weapons facility, the birthplace of the bomb.

A lesser-known mission has it studying another sort of weaponry: germs.

For nearly a decade, Los Alamos National Laboratory has been developing the molecular tools to identify and

10-26-01  
pinpoint the origin of disease-causing organisms.

It has focused mostly on anthrax — or, more properly, *Bacillus anthracis*.

"Anthrax is the disease," explained biophysicist Jill Trehwella, who oversees the program. "Anthrax is the organism."

The identification of biological agents, whether they occur naturally or as a result of bioterror, can be crucial to saving lives.

The Los Alamos project gets about \$10 million annually — a fraction of the lab's \$1.4 bil-

Please see **ANTHRAX, 2**

# ANTHRAX Lab is one of the major players in anthrax investigations

From Page 1

lion budget — from the Department of Energy's Chemical and Biological National Security Program.

Years of work by researchers at sites including Los Alamos, Northern Arizona University and Louisiana State University has created the world's biggest bank of genetic information on *Bacillus anthracis*.

Scientists can identify the origins of organisms based on the information in the DNA.

"What it does is allows you to take an unknown sample that comes in, and look at the particular aspects of its genome, and — if they match the information in the data base — you can say, 'Ah, this matches the dead cow in Minnesota.' Or, 'This is a laboratory strain that is used widely in research.' Or, 'This is a vaccination strain that couldn't hurt anybody,'" Trewhella said.

Researchers also can figure out whether the organism has

been genetically modified.

"It's a forensic analysis — helps you find the bad guy, or helps you find if it's natural or not," Trewhella said.

Trewhella says the lab's expertise has been used to investigate, years after the fact, a 1979 anthrax outbreak in the former Soviet Union; help United Nations weapons inspectors in Iraq; and trace a mid-1990s outbreak in Australia to 145-year-old anthrax spores from buried cattle that had been imported from India.

Officials are mum about whether that capability has given the Los Alamo lab any role in the investigation of the East Coast anthrax scare.

"We would never comment on an ongoing investigation," said Trewhella, citing the criminal nature of the probe.

Over the last 2 1/2 weeks four men, including one who died, have been diagnosed with inhalation anthrax, a disease not seen in this country since

1978. Six others, including two postal workers in New Jersey, have been infected with a highly treatable form of anthrax that is contracted through the skin. Thousands have been tested for exposure to the bacteria.

Jittery about making its employees a target of terrorism, the lab has clamped down on contacts with its researchers, funneling information instead through Trewhella, a 17-year lab veteran and head of its 2-year-old Bioscience Division.

Secrecy is nothing new in Los Alamos, where the Manhattan Project developed the world's first atomic bombs. The city that grew from a wire-fenced Army encampment at the end of a winding dirt road was not even open to the public until 1957.

Trewhella says the laboratory's interest in the biological sciences is a natural outgrowth of its efforts to understand the impact of radiation on the human body.

The researchers who study anthrax and other pathogens — including other members of the bacillus family, as well as *Yersinia pestis*, which causes plague — comprise about 20 percent of the Bioscience Division, which has the equivalent of about 200 full-time employees, according to Trewhella.

All told, about 14,000 people work at the lab, including contractors, security guards and other support personnel.

The Los Alamos laboratory does not work with anthrax-causing organisms. Instead, it uses in its research the less dangerous vaccine or research strains.

But Trewhella says being able to work with "small amounts of live, virulent agent" would improve its research capabilities, and her division proposes to build a biosafety level 3 (BSL-3) laboratory that would handle infectious organisms.

An environmental assessment of the proposal, required

before the lab and the Department of Energy decide whether to proceed, is under way.

The proposal has been criticized by watchdog groups that say the facility is unnecessary — because the same work is already done at other labs — and potentially dangerous. Locating a biowarfare facility at a weapons laboratory sends the wrong signal to other nations, they also contend.

"What Los Alamos wants to do is what could best be characterized as defensive biowarfare research," said Greg Mello, director of the Los Alamos Study Group. "We think it's very important to separate those functions from the offensive warfare research which is going on all around it."

He worries that the BSL-3 proposal is "meant to be the leading edge of a very large biology program at Los Alamos — and it's the proverbial nose of the camel."

# 'Learn-In' Promotes Peaceful Methods

## Residents Gather To Discuss Alternatives

BY MORGAN LEE  
Journal Staff

A gymnasium full of people spent their Saturday in Santa Fe studying peaceful alternatives to the war on terrorism.

Local students, not yet of military-service age, warmed up the crowd with a round of open-mike-style poetry and personal thoughts about the aftermath of the terrorist attacks on the Pentagon and New York.

Ben Linke, 14, of Santa Fe said people broadcasting the message of "God bless America" should change their tune.

"I think it's God bless the world," said Linke, whose comments won loud applause from a crowd seated in metal folding chairs at St. Francis Cathedral School.

Psychotherapist Shell Goldman



**GOLDMAN:**  
Psychotherapist showed breathing techniques

gave the crowd a quick lesson in emotional first aid and deep breathing.

"We need to listen to ourselves as if we were listening to a message from the universe," Goldman told the crowd.

After these introductions, speakers took to the lectern to discuss civil liberties and foreign policy.

Reber Boulton, co-director of the American Civil Liberties Union of New Mexico, warned the crowd that civil rights always contract in times of war.

"It's not about bin Laden, it's not about the terrorists," Boulton said. "It's about consolidating control that powerful people have."

The director of the Mexico Solidarity Network and a former CIA analyst were also scheduled to speak. The crowd broke into focus groups during the afternoon to discuss issues such as community care, political action, media and communication, foreign policy and networking.

The all-day "learn-in" grew out of an earlier gathering on Sept. 22, explained Peggy Prince, director of Peace Action New Mexico.

The dozens of sponsors of Saturday's learn-in included the Los Alamos Study Group, Women in Black, Church of the Holy Flame, New Mexico Toxics Coalition, the Green Party of Santa Fe and the

First Presbyterian Church.

Organizer Kim Parko, who focuses on media communications, said the learn-in and related gatherings are aimed at finding concrete solutions to international problems, such as a food shortage in Afghanistan that could prove disastrous for civilians during the oncoming winter.

The learn-in was also aimed at helping people understand current

events and their implications, according to Prince.

"Listening to people like Mr. Boulton is critical for us to learn the deeper meaning of what's happening," Prince said. "For me, what I really want to get out of today (is a) deepening of my own understanding of what has gotten us here today."

## Labels waiting to be collected

More than 1,000 labels signed by New Mexicans asking Gov. Gary Johnson to close a nuclear waste site at Los Alamos National Laboratory wait at a local food bank for state officials to pick them up.

Members of the Los Alamos Study Group delivered the food cans labeled as miniature nuclear waste drums about a month ago as a part of the ongoing campaign.

Greg Mello, the group's director, said representatives in Johnson's office assured him they would remove the labels from the food can before delivering them to the Food Depot, but they didn't.

Food Depot employees removed the labels, and they're waiting for New Mexico Environment Department officials to pick them up, Mello said.

Environment Department officials are required to keep a mailing list to inform concerned citizens of their actions, and names and addresses of people who signed the cans should be added to the list, Mello said.

11/2/01

MSM  
Staff and wire reports

# 'Can'paign Opens Can of Problems

11/2/01

## Nuke Waste Letters Sent on Vegetables

BY JENNIFER MCKEE

Journal Staff Writer

A self-described "whimsical" letter-writing campaign staged by a local nuclear watchdog group stirred up potential legal trouble for the governor and the Environment Department on Thursday.

Last summer, the Los Alamos Study Group launched its so-called "can"paign to end nuclear waste dumping at Los Alamos National Laboratory. Rather than write the governor requesting that he close the lab's nuclear waste dump, known as Area G, the group instead printed a letter to that effect on can-size labels printed to look like drums of nuclear waste. The group purchased thousands of cans of peas, pork and beans, corn and other goods and wrapped each one in the nuclear-waste-drum letter.

The group then sold the cans for \$3 — each addressed and signed by whomever purchased it — and delivered 1,000 of them to Gov. Gary Johnson's office this fall.

The hope, said Greg Mello, head of the group, was for the governor to remove the labels, or at least copy down the names and return addresses off the cans, and donate the cans to a local charity.

The governor apparently made good on at least part of the group's expectations.

Mello said he learned Wednesday that the 1,000 cans had been delivered to the Food Depot still bearing the "radioactive waste" labels. No one at the New Mexico Environment Department, however, had made a list of who sent the cans or their addresses.

Mello said that violates the federal Resource Conservation and Recovery Act, and when he first found out about the Environment Department's failure to list the names on the cans, Mello vowed legal action.

His justification lay in federal environmental law and wording on the letter printed on each can.

Each letter states, "Please put me on a mailing list ... for all other opportunities for public comment on disposal and cleanup at Los Alamos."

And according to the Resource Conservation and Recovery Act,

Mello said, the Environment Department, which knew about the cans and had read the letter, was legally bound to gather up the return addresses of every person who sent the governor a can. The New Mexico Environment Department has that responsibility because that agency carries out the Resource Conservation and Recovery Act.

"It wasn't ambiguous," Mello said. "It is a letter. It looks like a letter. It has a letter on it."

Furthermore, he said that at many meetings he's had with Environment Secretary Pete Maggiore and other agency officials, everyone seemed to know about the can letter and recognize that each can represented a legitimate citizen's request to be kept abreast of the state permit to the Los Alamos lab.

But Maggiore said Thursday he didn't think the cans were formal letters so much as a "symbolic petition."

Plus, said department spokeswoman Kathy Tyson, Maggiore went to the governor's office the day the study group delivered the cans and heard their complaints firsthand.

Furthermore, Maggiore said, the letters were sent to the gov-

ernor's office — not the New Mexico Environment Department — and the letter printed on each can begins with "Dear Governor Johnson," not "Dear Secretary Maggiore."

"If (Mello) wanted me to get those addresses, what he should have done was give them to me," Maggiore said, adding that he gets lots of letters from people wanting to be put on the department's mailing list, "but those letters come to me or the program, they don't go as a vegetable can to the governor's office."

Mello vowed to "see the Environment Department in court," at one point Thursday afternoon.

But before lawyers could ready their briefs, Maggiore called Mello, who said he had all the addresses in the study group's own electronic address book and would share them with the Environment Department. Also, the Food Bank removed the labels and saved them all in two large cardboard boxes.

Maggiore said he plans to retrieve the labels.

Mello said later that he made the electronic address list intentionally because he believed that the Environment Department would not take the cans seriously.

SUNDAY

NOVEMBER 11, 2001

ONE DOLLAR

# War on terror boosts role of labs

By JEFF TOLLEFSON  
The New Mexican

This fall's terrorist attacks have focused new attention on the national defense laboratories and their non-nuclear research.

LANL's Alamos National Laboratory houses the world's most comprehensive anthrax database, a key tool in the investigation of recent anthrax contamination. And a foam substance used to clean up anthrax spores was created at Sandia National Laboratories.

Both labs are involved in the National Infrastructure Simulation and Analysis Center, which uses computer simulations of terrorist attacks to pinpoint the vulnerability of pipelines, the power grid and other national infrastructure. The center garnered an extra \$20 million for the center in the Anti-Terrorism Act passed last month.

The Sept. 11 terrorist attacks and the dispersal of anthrax germs lend new significance to the work of the labs. Homeland Security Secretary Tom Ridge recently met with Sen. Pete Domenici, R-N.M., and lab leaders to discuss the labs' role in the fight against terrorism.

"These laboratories serve a multitude of purposes," Domenici said Thursday, adding that they have shown their capacity for cutting-edge research that extends well beyond their main focus on nuclear weapons.

"What we are doing right now is what we've done historically. We take existing technology and we apply it to emerging national issues," said Terry Hawkins, leader of LANL's Nonproliferation and International Security Division.

Hawkins said the lab is researching terrorism in five main areas: computers, chemicals, biological weapons, vehicles and

# LABS

Continued from Page A-1

nuclear science.

In many cases, funding for these projects does not come directly from Congress, he said. LANL proposes research projects to other federal agencies, which decide whether to grant funding.

Hawkins estimated that several hundred such research proposals are being developed. One proposal to the Federal Aviation Administration would focus on a new technology for airport security.

Overall spending at the labs has gone up in recent years, and this season was no different in Washington. Domenici recently wrapped up the main spending bill for the Department of Energy and the labs. The bill contains what Domenici called a record 14 percent increase for nuclear-weapons stockpile stewardship.

New Mexico's senior senator said the increases had nothing to do with the Sept. 11 attacks, which brought Congress together for several bipartisan votes related to national security. Domenici and lab officials say the budget negotiations had been in the works long before September.

"The big terrorist attack occurring on the 11th has not, the way I see the numbers... changed in any way the allocation of resources," Domenici said.

Congress allocated \$5.7 billion to stockpile stewardship. That's \$700 million more than last year and \$400 million more than the Bush administration requested, Domenici said. LANL officials generally defer budget questions to Domenici's office.

*"We are increasingly going to run up against technical issues that have a large scientific component, and the national labs are in a position to make a contribution there."*

REP. TOM UDALL  
New Mexico Democrat

The Waste Isolation Pilot Plant received \$28 million more than its budget request for a total of \$193 million. Overall, the Department of Energy received \$19.5 billion — \$1.4 billion more than requested. Domenici says the DOE's budget proposals demonstrate that the Bush administration has not "recognized or appreciated the significance of the laboratories."

Domenici says the new budget is good news for Northern New Mexico, whose economy is highly affected by the lab activity. More money going to LANL means more projects, which translate into jobs and business that benefit the local economy.

Rep. Tom Udall noted that this year's funding will boost research into bioterrorism as well as renewable and alternative energy. The labs will play a crucial role in these and other areas as the nation seeks to make itself less vulnerable to terrorism, Udall said.

"We are increasingly going to run up against technical issues that have a large scientific component, and the national labs are in a position to make a contribution there," Udall said. "That's probably why we've seen an increase in some of these areas."

Already LANL is conducting research into global

warming, AIDS and other issues not related to weapons.

But not everybody looks at national labs as generally benign research centers that double as economic powerhouses. The labs' harshest critics see massive bureaucracies that remain centered on weapons of mass destruction, the focus of record budget increases this year.

"There's been a loss of budgetary discipline," said Greg Mello, who heads up the Los Alamos Study Group. "Really, most of the program is unnecessary, provocative or both."

Spending on nuclear weapons has increased since 1993, when the nuclear test-ban treaty pushed the government to find other ways of maintaining the nation's nuclear arsenal.

Mello said the lab is — as it should be — researching issues related to terrorism. Even so, he is critical of LANL's fiscal accountability and questions whether Los Alamos is the proper place for more research along the same lines.

# LANL hopes to accelerate shipments to WIPP

11/14/01  
By JEFF TOLLEFSON  
The New Mexican

New fears about terrorism and wildfires are forcing the Department of Energy to consider speeding up some shipments of waste from Los Alamos National Laboratory to the Waste Isolation Pilot Plant in Carlsbad.

The result is an internal discussion about new, "outside-the-box" methods that could hasten shipment of the plutonium-contaminated waste generated during several decades of nuclear-defense projects, according to James Orbin, director of the Waste Management Division for the DOE in Albuquerque. In particular, Orbin says the agency hopes to expedite shipment of the most unstable waste — that which is most susceptible to a terrorist attack or a catastrophic wildfire.

Orbin says it would take 16 years to complete shipment of transuranic waste from Los Alamos National Laboratory to WIPP. U.S. Department of Energy officials say the budget initially proposed for next year could extend that timetable by up to 15 years to 2032.

Neither of those alternatives is desirable given the political climate following Sept. 11, according to Orbin. He says the runaway Cerro Grande fire that torched part of Los Alamos in 2000



# LAB

Continued from Page A-1

also has the agency a little more wary about the danger fires pose to LANL's waste-management facility.

New alternatives range the gamut. One proposes a series of road closures during shipment from Los Alamos to WIPP; other, more technical alternatives would change the way waste is handled during shipment. All of the new ideas assume that the waste will be properly characterized according to the current process. Any changes must be approved by relevant state and federal agencies.

"We recognize that these, by and large, are not activities that we could undertake unilaterally," he said, "but it seemed like a big enough opportunity and a big enough problem that we really needed to come up with something."

LANL officials could not be reached for comment on Tuesday.

The laboratory currently stores enough radioactive waste to fill an estimated 45,000-50,000 barrels, according to the DOE. Orbin said much of the waste is fairly stable — contaminated toolboxes or radioactive materials that have been solidified in concrete — but about 2,000 barrels contain loose debris

and plutonium that could be spread by fire.

"If an airplane were to crash into here, it's more dispersible," Orbin said. "Right now, what we are saying is if we could just deal with 2,000 drums, it would make a big difference."

For Orbin, it's a simple assessment of risk: Relatively few barrels are posing the largest risk. At the same time, he noted, the DOE's goal should be to transport all of the waste to WIPP sooner than later. The agency is taking a new look at the situation and has already notified several state and federal agencies that new proposals could be coming down the pipe.

Already, local activist organizations are skeptical about the need for and benefit of such a project.

"WIPP was opened on the proviso that certain strict transportation requirements would be met," said Greg Mello, who heads up the Los Alamos Study Group in Santa Fe. "I appreciate the candor with which the DOE is putting forth this proposal, but it does represent quite a reversal from the position that was used to open the site."

For Mello, the proposal boils down to weakening environmental and safety standards in order to save money. The

goal of safely maintaining 2,000 barrels — less than 5 percent of the total — can be dealt with on site without compromising the current standards, he said.

"There is more to this problem," Mello said. "The option of safe storage of waste, not just for this waste, but for the other 95 percent of the waste, ought to be looked at on site."

Orbin did cite cost as one factor. Current transportation regulations require much of the waste to be diluted before shipment. Orbin estimated the price tag for the dilution process at more than \$100 million. At the same time, he said, much of the difficulty and expense is driven by a relatively small number of barrels.

By closing the roads and transporting the barrels with safeguards other than dilution, for instance, the DOE could eliminate more than half of the total shipments, Orbin said.

The DOE is hoping to begin an internal review of various options within a couple of weeks. Then the agency begins looking for feedback.

"We've got to figure out some better way, and maybe that way is not just throwing more money at it," he said.

# Safety of Proposed Biolab Challenged

4/15/01

## DOE Listens To Citizens' Concerns

BY JENNIFER MCKEE  
Journal Staff Writer

LOS ALAMOS — To a passerby the conversation overheard in the Peace Pipe Room of the Los Alamos Inn Wednesday night must have sounded bizarre.

"How do we know the trash is

sterilized?"

"How do we know you won't be advancing biological weapons?"

"What if both radiation and deadly microbes escape?"

Plans announced last spring by Los Alamos National Laboratory to build a special kind of biological lab — one designed to let scientists safely study more infectious, dangerous pathogens than currently allowed — have stirred up fears among many critics and watchdogs in northern New Mexico.

The Energy Department hosted the public meeting to take comments on the agency's recently released environmental assessment of the lab, a study that must be completed before any decision on the research lab can be made.

The concerns were many, though they centered on two themes: safety and the wisdom of conducting biological research at a lab best known for developing weapons of mass destruction.

The scientists and agency repre-

sentatives were not silent, either, saying the research lab they want to build would be just as safe and they would conduct research with the same professional and government oversight as the hundreds of similar labs throughout the country.

"There's no detectors for the stuff coming out," said Jom Arends of Concerned Citizens for Nuclear Safety.

Arends also was concerned about pathogens and plutonium being housed in one place. A well-planned

terrorist attack could free all of it, she said, and according to a Military Medical Operations Office handbook that Arends referred to, radiation would make people even more susceptible to the disease-causing microbes released.

Other critics, such as the Los Alamos Study Group and Peace Action New Mexico, questioned how the public could be assured no offensive biological weapons research would go on at the proposed lab.

According to Julie Wilson, operations safety officer at the lab's Biosciences Division, the new research lab will be governed by the same committee that has overseen biological research at Los Alamos lab for 20 years. That committee — made up of lab scientists, local doctors and members of the public, among others — sanctions every project scientists propose and would not approve a project that violates

See SAFETY on PAGE 2

# Safety of Proposed DOE Biolab Challenged

DOE  
PAGE 1

international law, such as offensive biological weapons work, Wilson said.

Jim Brainard, deputy division leader of the Biosciences Division, said there's something else that would stop bioweapons research: the decency of individual scientists.

"This place has had a long history, but the science here has always been in support of the mission," he said. "In our case, scientists have a mission to do defensive biological work, not offensive. There is a very strong sense of pride and responsibility. I truly believe it would be

hard for one or two people to hide an offensive experiment or project in the midst of that community."

Some critics, however, questioned how much the public can rely on that. And not even decency can stop accidents, like a bag of trash slipping out of the lab untreated, with viable, disease-causing pathogens inside, or an employee leaving the lab with live pathogens on his or her hands.

Babs Marrone, also of the Biosciences Division, said in the 16 years she has been at LANL, which has been conducting biological research since the late 1940s, no bag of biological waste has left the

building without being treated in an autoclave, a sort of enormous pressure cooker that kills any pathogen inside the garbage. Treated bags bear a marker on the outside that changes color during treatment, she said, letting garbage handlers or any one else know the garbage has been rendered safe.

The environmental assessment called for treating the waste and putting it in the regular landfill. Biological waste that has been autoclaved is, by law, no longer considered hazardous waste, said Ray Hahn, who oversees disposal of all the lab's garbage. The biowaste, at one point, appeared headed for the

Santa Fe landfill, but that will not happen, Hahn said.

He is now planning on autoclaving the waste and hauling it to an industrial landfill in Rio Rancho.

Some people complained that the public comment period, limited to 21 days, was not long enough. Arends handed Elizabeth Withers, the Energy Department's National Environmental Project Act compliance officer, a stack of 42 letters, each requesting a longer comment period.

Withers said she will give them to the local Energy Department head to make a decision.

## LOS ALAMOS NATIONAL LABORATORY

# Proposed biolab raises questions, concerns

◆ *Few doubt the need for high level research, new protections against threat of bioterrorism*

By ROGER SNODGRASS

lamonitor@lamonitor.com  
Monitor Assistant Editor

Officials with a vested interest in a new biological safety laboratory kept disciplined control of the flow of information at an informal discussion on Tuesday, significantly outnumbering watchdogs.

The conventional one-on-one dialogue was more like two-on-one in iso-

lated conversations at separate tables. There were even fewer unassociated members of the public at the three-hour session at the Los Alamos Inn.

If any critic disclosed a deal-breaker, or even a significant weakness that merited further investigation, it was not for anybody else to know other than the proponents. With only three weeks to study a complex technical document compiled by experts over the last six months, would-be critics could only circle the eight tables in the room chatting up an elusive defect that might be used against the plan.

Some concerns were answered rather easily.

Ray Hahn, who handles Los Alamos

National Laboratory's solid waste operations, and Tom Stark, who is engaged in pollution prevention, quashed fears that wastes from a new BSL-3 would endanger the county's ability to transfer their waste to the Caja Del Rio site in Santa Fe County. Hahn said they would use hazardous waste facilities in Wagon Mound or an industrial site in Rio Rancho, depending on what Santa Fe County decides.

Ross Garcia, the project manager for constructing the BSL-3 said the proposal for a temporary alternative to the permanent building was added after Sept. 11 in light of increased security needs and simply allowed for a shorter time frame if national needs grew more

urgent. A permanent BSL-3, as planned, is still over a year away.

Peggy Prince of Peace Action New Mexico, which has been coordinating opposition to the biolab, sought assurances from project manager Bob Rush that another public meeting would be held and that the deadline for comment would be delayed due to inadequate public notice and the inability of public advocacy groups to obtain public documents on health and safety issues at the current facility.

"There should be another public meeting," she said, "with a panel at the front with experts to answer ques-

*Please see BIOLAB, 12*

## BIOLAB Interest groups question safety, intent

From Page 1  
tions."

Cathie Sullivan, who was associated with the Los Alamos Study Group at one time but is now unaffiliated, said she was interested in the work of the LANL Institutional Biosafety Committee, but that there had been no public notices on when the meetings were to be held.

The Biosafety Committee is held up by officials in the lab's Bioscience Division as one of the principal bulwarks of public assurance that activities in the current and future facility will maintain high standards of safety and operate above the board in matters of ethical or political concern.

"The lack of notice on the meetings is not sinister at all," she said. "It's probably just a matter of people ramping up to speed on this higher profile that they have now."

Nevertheless, she cautioned against the menace of "skullduggery," if not now, then in "six, seven, 10 years down the road." She didn't want to see a day when objectionable activities like designing some piece of an offensive biological weapon might slip in behind the national security apparatus without external accountability.

"It is naïve to think their motives will always be lily-pure," she said.

Rush said that the Biosafety Committee was legally required for work funded by DOE, but that he would go further to include defense and public health work as well. "All work will go through this committee."

He said he wanted "a better level of public confidence than

in the past." He also promised to see that the notices for the Biosafety Committee meetings were properly posted.

DOE and LANL are teaming up to replace and upgrade LANL's current Biosafety Level 2 (BSL-2) to a BSL-3, which would enable local researchers to investigate live samples of restricted infectious viruses, rather than process the lifeless chemical components of those microbes, as they do now.

The process for building the new laboratory requires an environmental assessment in order to make a preliminary decision on whether a more rigorous and time-consuming analysis, an environmental impact statement, is advisable. If there are insufficient grounds, the project can proceed.

In a sense, a BSL-3 is not a unique facility, since there are some 250 of them already throughout the country, including two in Albuquerque. They are simply highly controlled and sanitized workrooms that are maintained like surgical operating suites. Institutions of higher learning operate many of them.

"Universities operate in a different environment than we do," said Judy Wilson, the safety officer of the current BSL-2 facility at LANL. "They don't have to tell the public what they are doing."

Even before the tragic events of Sept. 11, and the ensuing reign of biological terror that has prompted testing of about 300 postal and other facilities for anthrax spores and resulted in approximately 32,000 people having been placed on antibacterial regimes as a

result of potential exposure, bioscience researchers within the national laboratories anticipated a national need for expanded capacity in the rapidly evolving field of bioscience.

As monitored by the Centers for Disease Control in the last decade, a number of large, complex outbreaks of emerging diseases have been identified in the United States, quite apart from fears about terrorists.

In Milwaukee in 1992, 400,000 cases of a waterborne parasite, cryptosporidiosis, came to light. New Mexico witnessed the outbreak of severe, unexplained acute respiratory disease now known as Hantavirus pulmonary syndrome in 1993. A salmonella outbreak caused by contaminated ice cream affected 250,000 people in 1994.

Throughout the world drug-resistant organisms have caused plague epidemics in India, Ebola hemorrhagic fever in Central Africa, avian influenza in Hong Kong, Hendra virus infection in Australia, and Nipah virus infection recently in Malaysia and Singapore.

Speaking before the Senate Appropriations Committee in May, Gen. John A. Gordon, head of the National Nuclear Security Administration which is charged with responsibility within DOE for the national weapons labs, laid out a rationale for expanded bioscience capabilities.

"The NNSA is providing the underpinning biological information necessary for biological detection that would support analyses for attribution and event construction purposes, and would aid other agencies in the development of medical and public health countermeasures."

Gordon asked for funds for developing chemical and biological detectors that could monitor situations during crises, for modeling and simulation abilities for rapid prediction in order to guide preparation and response activities, and for techniques to decontaminate civilian areas under attack.

The deadline for these types of advanced technologies is yesterday, but the likelihood that they will be necessary in the future has grown dramatically.

# DOE weighs early WIPP shipments

THE ASSOCIATED PRESS

11-15-01

LOS ALAMOS — The Department of Energy, prompted by new concerns about terrorism and wildfires, is considering faster ways of moving some shipments of plutonium-contaminated waste from Los Alamos National Laboratory to the federal government's underground dump near Carlsbad.

James Orbin, director of the waste management division for the DOE in Albuquerque, said the agency hopes to expedite shipment of the most unstable waste, which could be the most susceptible to a terrorist attack or a catastrophic wildfire.

The DOE estimates the lab currently stores enough radioactive waste to fill 45,000 to 50,000 barrels.

Orbin said much of the waste is fairly stable, such as contaminated toolboxes or radioactive materials that have been solidified in concrete. But he said about 2,000 barrels contain loose debris and plutonium that could be spread by fire.

"If an airplane were to crash into here, it's more dispersible," he said. "Right now, what we are saying is if we could just deal with 2,000 drums, it would make a big difference."

Orbin sees it as a simple risk assessment, with relatively few barrels posing the largest risk. At the same time, he said, the DOE's goal should be to transport all the waste to the Waste Isolation Pilot Plant east of Carlsbad sooner than later.

Activist groups are skeptical.

"WIPP was opened on the proviso that certain strict transportation requirements would be met," said Greg Mello, head of the Los Alamos Study Group in Santa Fe. "I appreciate the candor with which the DOE is putting forth this proposal, but it does represent quite a reversal from the position that was used to open the site."

Mello believes the proposal boils down to weakening environmental and safety standards to save money. He also believes the 2,000 barrels can be dealt with safely on site without compromising current standards.

"There is more to this problem," Mello said. "The option of safe storage of waste, not just for this waste, but for the other 95 percent of the waste, ought to be looked at on site."

Under the current schedule, it would take 16 years to finish shipping waste from Los Alamos to WIPP, Orbin said. DOE officials said the initial budget proposed for next year could extend that timetable by 15 years.

However, Orbin said that's not desirable in the wake of the Sept. 11 terrorist attacks.

In addition, the Cerro Grande fire that roared through parts of the lab and the community of Los Alamos in May 2000 alerted the DOE to the danger fires pose to the lab's waste management facility, he said.

Several alternatives have been suggested to speed up shipments, including road closures during shipments from Los Alamos to WIPP. Other, more technical alternatives would change the way waste is handled.

Any changes must be approved by state and federal agencies.

Orbin cited cost as a factor. Current transportation regulations require much of the waste to be diluted before shipment.

Orbin estimated that price tag at more than \$100 million.

He said, however, much of the expense is driven by a relatively small number of barrels. By closing roads and transporting barrels without diluting waste and taking other safeguards, the DOE could eliminate more than half the shipments, Orbin said.

"We've got to figure out some better way, and maybe that way is not just throwing more money at it," he said.

Publication: Jnl Legacy 1995 to July 2005; Date: Nov 15, 2001; Section: Final; Page: 74



# Date--11/15/2001 Section--New Mexico Edition--Final Page--D3

## Critics Challenge Safety of Proposed LANL Biolab

By Jennifer McKee Journal Northern Bureau

### Energy Department Listens to Concerns

LOS ALAMOS To a passerby, the conversation overheard in the Peace Pipe Room of the Los Alamos Inn on Wednesday night must have sounded bizarre:

"How do we know the trash is sterilized?"

"How do we know you won't be advancing biological weapons?"

"What if both radiation and deadly microbes escape?"

Plans announced last spring by Los Alamos National Laboratory to build a special kind of biological lab one designed to let scientists safely study more infectious, dangerous pathogens than currently allowed have stirred fears among many critics and watchdogs in northern New Mexico.

The Energy Department hosted the public meeting to take comments on the agency's recently released environmental assessment of the lab, a study that must be completed before any decision on the research lab can be made.

The concerns were many, though they centered on two themes: safety and the wisdom of conducting biological research at a lab best known for developing weapons of mass destruction.

The scientists and agency representatives were not silent, either, saying the research lab they want to build would be just as safe and they would conduct research with the same professional and government oversight as the hundreds of similar labs throughout the country.

"There's no detectors for the stuff coming out," said Joni Arends of Concerned Citizens for Nuclear Safety.

Arends was also concerned about pathogens and plutonium being housed in one place. A well-planned terrorist attack could free all of it, she said, and according to a Military Medical Operations Office handbook that Arends referred to, radiation would make people even more susceptible to the disease-causing microbes released.

Other critics, such as the Los Alamos Study Group and Peace Action New Mexico, questioned how the public could be assured no offensive biological weapons research would go on at the proposed lab.

According to Julie Wilson, operations safety officer at the lab's Biosciences Division, the new research lab will be governed by the same committee that has overseen biological research at Los

Alamos lab for 20 years.

That committee made up of lab scientists, local doctors and members of the public, among others sanctions every project scientists propose and would not approve a project that violates international law, such as offensive biological weapons work, Wilson said.



Publication: Jnl Legacy 1995 to July 2005; Date: Nov 15, 2001; Section: Journal North; Page: 160



# Date--11/15/2001 Edition--Journal North Page--5

## Faster Nuke Waste Shipments Proposed

### The Associated Press

#### Terrorism, Wildfire Concerns Raised

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Grande fire that roared through parts of the lab and the community of Los Alamos in May 2000 alerted the DOE to the danger fires pose to the lab's waste management facility, he said.

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"We've got to figure out some better way, and maybe that way is not just throwing more money at it," he said.

# Proposed Los Alamos germ lab raises fears

By Deborah Baker 11-17-01  
THE ASSOCIATED PRESS

LOS ALAMOS — Northern New Mexicans are used to having plutonium in their back yard. Their neighbor on “the hill” is a nuclear weapons lab.

But now the prospect of having live anthrax and other deadly germs at Los Alamos National Laboratory is giving some residents the creeps.

The lab wants to build a research facility where scientists would work with live

infectious agents such as plague, anthrax and tuberculosis.

The new, more secure unit — to be called a biosafety level 3, or BSL-3, lab — would be the only such lab in the Department of Energy’s complex and could give Los Alamos a bigger role in the nation’s burgeoning fight against bioterrorism.

The lab’s Bioscience Division already has done some detective work for the government on the recent anthrax attacks, using sophisticated DNA detection tech-

## ON THE NET

Los Alamos National Laboratory  
<http://www.lanl.gov>

nologies.

But scientists are restricted to working with less-dangerous vaccine or research strains, which are dead organisms, rather than live anthrax.

And division leader Jill Trehwella com-

plains that having to rely on other labs for their samples is slow and inefficient and heightens the chances for contamination.

“We need to be able to work with small amounts of the live pathogen,” Trehwella said.

Critics, however, worry about safety.

“It’s the public that could be placed in jeopardy if anything went wrong at this bio lab,” said Peggy Prince of Santa Fe-based

Please see **LAB/A5**

**LAB** from A1

Peace Action New Mexico.

They're also concerned about putting a bioweapons research lab at a secretive nuclear weapons facility — sequestered, they say, from public scrutiny.

And they fear that what would start out as defensive work could some day be turned into an offensive program, with the lab a logical place to "weaponize" germs.

"I believe that if this laboratory is built, it will be inevitable that the United States will create offensive biological weapons," said Greg Mello, director of the watchdog Los Alamos Study Group. "The technological pressures will be immense."

Opponents aired their concerns to a group of DOE and lab employees who gathered in the conference room of a Los Alamos motel this week for an informal question-and-answer session with the public.

The officials noted that BSL-3 labs — typically found at universities, hospitals or pharmaceutical research centers — are designed and engineered for safety, according to federal standards.

A special air-handling system would keep air flowing in, and filter it as it left. Biologists in gowns, gloves and booties would work with amounts of pathogens typically the size of the lead visible in a sharpened pencil, they said.

"I know these people. I trust these people to protect me and protect themselves," said Jim Brainard, deputy division leader of the Bioscience Division, as he looked around the room at his colleagues.

The three proposed locations for the new lab — the site isn't determined — are in areas of Los Alamos National Laboratory accessible to the public, "so people can come and visit, and take the message out that it's really defensive, not offensive," Brainard said.

In informal discussions at small, round tables, lab workers were peppered with questions: Why here? Why now? At what cost? What control do you, the scientists, have over the type

THE ALBUQUERQUE TRIBUNE

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office space.

As alternatives, prefabricated structures could be considered, either as a permanent lab or for temporary use while a permanent lab was being built, the report said.

Officials say they hope to have the

new lab up and running by spring 2003.

Opponents say the Department of Energy is moving too quickly on the proposal. By the end of this year, a DOE review team could recommend whether to proceed with it.

"We need to have the capability within the department to culture bacteria, so we can extract enough DNA from the samples to do the kinds of tests we need to do," said Elizabeth Withers, a DOE employee in charge of making sure that the lab project gets sufficient environmental scrutiny.

A DOE Office of Inspector Gener-

al report last February criticized the agency's work with biological agents for not being well enough organized or coordinated. The DOE's Albuquerque office, it said, was unaware of the anthrax experiments under way at Los Alamos.

Trewhella, however, noted that the report also found that there had been no harm to the safety and health of DOE employees or contractors, or to the public. Communications were improved as a result of the report, she said.

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of work? What are the health implications?

"The record is replete with hiding the health effects of our nuclear weapons program on our military, our civilians, our workers," said Cathie Sullivan, a Santa Fe silkscreen printer who has been keeping an eye on Los Alamos operations for more than 20 years.

Chris Mechels, a retired computer scientist who worked for Los Alamos for 11 years, said the biological research work shouldn't be done within DOE, "because they don't have an adequate concern for worker safety or

# LANL Yanks Web Info

## Limited Public Access Worries Some Activists

11-17-01  
By JENNIFER MCKEE  
*Journal Staff Writer*

Los Alamos National Laboratory, along with dozens of other federal agencies, has been pulling public information from its Web site, citing worries that the documents could be useful to terrorists.

The trend has sparked debate among activists, government watchdogs and disarmament groups, with some unlikely sources arguing for less online public access to unclassified documents.

Discussions swirl around two themes:

- Will curtailing public access to information make us safer?

- And, with the Internet now such a fixture in American life, is pulling public documents, particularly those required by law to be publicly available, legal?

In LANL's case, its federal overseer, the National Nuclear Security Administration, told the weapons lab's Oct. 4 to "take immediate measures to safeguard information on Web sites," according to John Gustafson, a Los Alamos lab spokesman, and gave the lab some criteria concerning what could be dangerous.

The lab assembled a team of reviewers, "tirelessly" poring through hundreds of pages of online material, Gustafson said. Some of what the team reviewed was clearly considered suspect according to the NNSA criteria and has been pulled. Other documents were not so obviously dangerous but have been pulled, perhaps temporarily, as reviewers try to decide if they should stay online.

Some of the documents no longer online are so obtuse, their absence may draw little notice, such as "Physics-Based Modeling of Hydrodynamic Ram Phenomena." Others have titles such as "Measuring Human Brain Activity" and "Fuel Cells for Transportation," whose value to would-be terrorists is not obvious.

At least one NNSA facility, Pantex, the former nuclear weapons factory near Amarillo, Texas, didn't stop with cleansing its Web site. Energy Department workers there took boxes of public documents from the facility's Citizens Advisory Board's office, a local residents group organized by DOE, and also removed documents from Energy Department reading rooms in two nearby towns.

Los Alamos lab also has a reading room — a place at the lab's Community Relations Office in downtown Los Alamos, where the public can find copies of environmental documents required by law to be publicly available.

"The LANL reading room has not received any instructions regarding its materials," Gustafson said, and hasn't had anything removed

# Public Info Removed From Web

from PAGE 1

## Making their cases

At least one government watchdog group is relieved to see some of the information leave the Web. The Project on Government Oversight, an ardent DOE critic in the past, actually requested that the agency remove some maps — including one of a nuclear facility at Los Alamos — from agency Web sites.

In an Oct. 3 letter to Energy Secretary Spencer Abraham, the group said the documents “seem to contain virtual target information for terrorists.” The NNSA directive to clean up department Web sites came just one day later.

Other groups, however, including many in Santa Fe, greeted the Web changes with less enthusiasm.

“It’s strip mining of public Web sites under the guise of security,” said Bob Schaeffer of the Alliance for Nuclear Accountability headquartered in Washington, D.C.

His group is also writing to Abraham asking him to explain the legal basis for removing unclassified documents from agency Web sites.

“These documents are basic tools of public involvement,” Schaeffer said.

Local activists said the changes have made an impact on them, and some, like Schaeffer, wonder if what the lab has done is legal.

Collin King, research director for Santa Fe-based Nuclear Watch of New Mexico, said he noticed that the lab had pulled its Resource Conservation and Recovery Act permit off the Web. This permit, required by the EPA and handled by the New Mexico Environment Department, is required by law to be publicly available.

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“The lack of openness is really scary,” King said. “And it’s across the board.”

A lab spokesman was not available Friday to refute or confirm those claims. Even if the recovery act’s permit was still online, the lab has apparently disabled its Web search function, so a member of the public would have to know the Web address for a document to find it.

Greg Mello of the Los Alamos Study Group of Santa Fe said the lab’s reading room, where the permit and other public documents are housed, is so inadequate that pulling the recovery act from the Web may violate the law.

Because the lab must make the document available, and the reading room isn’t up to snuff, pulling the recovery act permit from the Web amounts to making it inaccessible, he said, which is against the law.

## No clear rules

But there is little consensus on this point.

Gustafson said he’s not aware of any legal requirement impelling the lab to post anything. In fact, the lab has so many public records that it would be hard pressed to find a server that could accommodate them all, he said.

Schaeffer said he’s not aware of

any requirements either, although he said the main federal laws requiring publicly available environmental documents were passed in the 1970s, long before the Internet came along. It could be argued, he said, that based on today’s communication standards, posting items on the Internet now constitutes making a document “publicly available.”

The movement to cleanse government Web sites has other detractors.

Steven Aftergood, head of the Federation of American Scientists Project on Government Secrecy, said it is not clear that taking information off the Web makes the nation any safer.

Even if the documents do point out vulnerabilities, hiding weaknesses doesn’t make them go away, he said.

“It is only by identifying our vulnerabilities that we have any chance of correcting them,” Aftergood said.

And he pointed out another wrinkle in the Web debate: Because there are no real guidelines detailing what must be presented online — if anything — there are likewise no guidelines governing what can be removed.

He thinks the government needs to establish rules, with public involvement, that would give some order to the posting and unposting of online information.

## State&Region

# LANL plan for anthrax lab makes neighbors nervous

The Associated Press

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The lab's Bioscience Division already has done some detective work for the government on the recent anthrax attacks, using sophisticated DNA-detection technologies.

But scientists are restricted to working with less-dangerous vaccine or research strains, rather than live anthrax.

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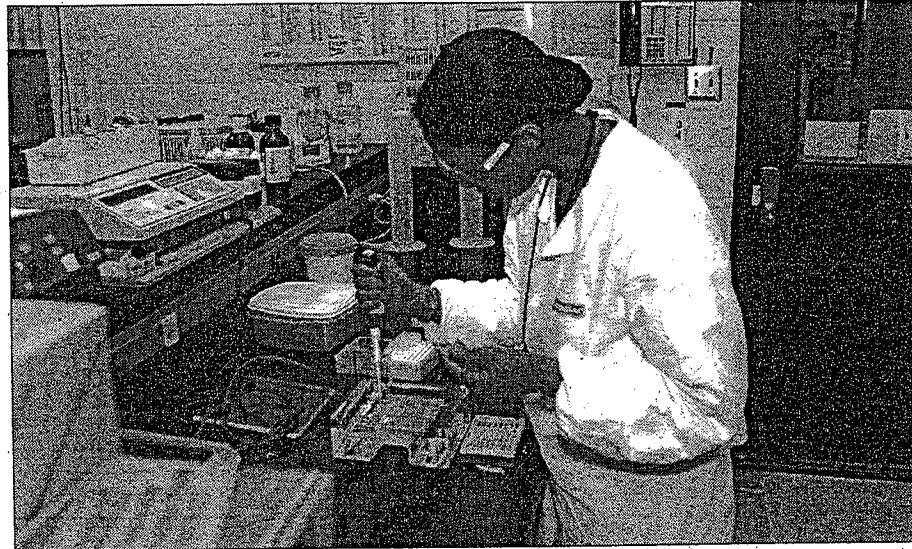
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The Associated Press

**Susana Delano, a molecular biologist and graduate research assistant at Los Alamos National Laboratory, uses a pipette to load a sample of anthrax DNA into a gel-electrophoresis tray. The lab wants to build a research facility where scientists would work with live infectious agents.**

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# DOE denies extension requests

► *Comment period for proposed lab ended Monday*

By **JEFF TOLLEFSON**  
The New Mexican

The U.S. Department of Energy denied requests from advocacy groups and U.S. Sen. Jeff Bingaman to extend the comment period on a plan to construct a facility that would boost research on infectious agents such as anthrax at Los Alamos National Laboratory.

The comment period officially closed on Monday. In a proposal that predates recent anthrax scares, the laboratory wants to build a "biosafety level 3 facility" to expand on

current research into anthrax and other microorganisms that could be used as weapons. Some 250 such facilities exist around the nation, the DOE says.

Bingaman, D-N.M., criticized DOE's decision not to extend the comment period. In a letter to the Los Alamos office of the DOE, Bingaman objected because the DOE made its decision before receiving his letter on Friday — three days before official period was to end. All of the relevant information that could affect such a decision was not even considered, he wrote.

"It has become clear to me that the community would like to put forth additional comments to enhance the environmental assessment and the project as a whole," Bingaman wrote. "I hope

that, despite your decision, you will continue to accept public comment in all its forms and take those comments into consideration as this project continues to move forward."

DOE officials could not be reached Monday for comment.

Peace Action New Mexico announced that it would "vigorously appeal" the decision. The Santa Fe-based group praised similar efforts by Bingaman and U.S. Rep. Tom Udall, D-Santa Fe.

"Things are really kind of hot right now, and I think we're going to be able to appeal for a longer extension period," said Peace Action Director Peggy Prince.

The organization says it has garnered more than 700 signatures on a petition asking that the DOE extend the comment period and conduct

a more-detailed Environmental Impact Statement.

DOE plans to make a decision on the environmental assessment in December. A finding of 'no significant impact' would allow the agency to move forward and build the laboratory; otherwise the DOE must conduct a more detailed analysis.

Peace Action and the Santa Fe-based Los Alamos Study Group maintain that the project is too complex to move forward after only a 21-day comment period. The groups question the safety of the facility and the propriety of conducting research at a weapons laboratory on biological agents.

DOE maintains that the expanded research, like that currently under way, could be used only for defense purposes.



# Anthrax Shipments Targeted

## LANL Doesn't Want To Take Live Spore Samples

*Journal Staff Report*

11/22/01

Samples of anthrax labeled "virulent" and shipped to Los Alamos National Laboratory were sent properly and according to federal rules; a lab spokesman said Wednesday.

But the lab would prefer not to receive such samples, which can contain live anthrax spores, and is reviewing internal procedures to try and prevent such shipments in the future, lab spokesman John Gustafson said Wednesday.

The samples were sent from Northern Arizona University, one of the lab's partners in anthrax research, on Oct. 26. Gustafson said the materials were properly packaged and were handled properly by the lab when they arrived.

In a written statement issued Wednesday, a Northern Arizona University spokesman said the Keim Genetics Lab at the university has a permit from the Centers for Disease Control to handle live anthrax.

"We comply with all federal regulations concerning handling of anthrax," the spokesman said.

Gustafson said the lab routinely receives non-virulent shipments of DNA extracted from anthrax samples from the university. But because there is always a chance that live material could have slipped through the extraction process, the lab sterilizes both the packaging and samples and then cultures them to double-check that there is no live material left before proceeding with research, Gustafson said.

"When this one was received and was labeled virulent, we followed those procedures, too," Gustafson said. "The lab assumes that in every sample, there is some statistical chance that there is some live material. So we sterilize it on receipt. That's our safety step that

See LANL on PAGE 2

# LANL Targets Shipment of Live Anthrax Spores

from PAGE 1

we've added to the process."

LANL announced Tuesday that the lab and the National Security Administration are reviewing their shipping procedures after receiving the virulent sample.

Gustafson said CDC regulations usually require institutions receiving virulent samples to register with that agency. But according to information the lab has received from the CDC recently, institutions are exempt from the registration requirement when public health and safety concerns are an issue.

The virulent samples were shipped by overnight mail with a

private, commercial carrier, Gustafson said.

"All Department of Transportation regulations for shipping this material were followed, and similar stuff is shipped to medical centers and research facilities all the time," he said.

Both Northern Arizona University and the laboratory's anthrax research facilities have a biosafety level of 2 and are equipped to handle even virulent anthrax safely, Gustafson said. But the lab has decided independently not to handle such materials in its current facilities, he said.

The lab is proposing to build a new research facility with a

biosafety level of 3 to develop faster responses to potential biological attacks.

The Los Alamos Study Group, a LANL watchdog organization, does not support LANL's application for a BSL-3 lab because it will be redundant of hundreds of similar labs across America and a waste of federal funds, director Greg Mello said Wednesday.

A secondary concern is health and safety issues related to the handling of anthrax and other hazardous organisms because of LANL's poor safety record, Mello said.

"We haven't even gotten this facility built and there is already a glitch," Mello said about the recent

shipment of virulent anthrax to LANL. "We don't understand why we need to multiply the number of facilities playing with anthrax."

Mello and others also have objected to a BSL-3 lab at LANL because it would not be subject to foreign inspections and might raise questions about whether the United States was pursuing a biological weapons program in violation of the international Biological Weapons Convention.

Gustafson said the suggestion that the lab might work on biological weapons was "offensive."

"We work on defensive capabilities only. Period," he said.

Paper: Chicago Tribune

Title: Anti-terror work revitalizes Los Alamos - Weapons lab staff pushing mission 'against bad guys'

Author: Robert L. Kaiser, Tribune staff writer.

Date: November 26, 2001

Section: News

Page: 4

This is a place where the mundane and the unthinkable are hopelessly tangled, where scientists who get \$10 haircuts at lunchtime design devastating weapons in the afternoon, and men spending retirement in the craggy mountains remember working on the Manhattan Project.

Los Alamos National Laboratory, birthplace of the atomic bomb, still gives some around here the creeps. But in a twist brought about by the specter of terrorism, many workers in the mysterious, low-slung buildings and metal trailers are working overtime trying to save the world from weapons of mass destruction. And the nuclear age that Los Alamos helped usher in nearly 60 years ago occasionally comes back to haunt employees such as Terry Hawkins, whose job sometimes requires him to imagine what alleged terror mastermind Osama bin Laden might do next.

"We sit around and think of these very bad things, and we dare not tell anybody," said Hawkins, director of the Non-proliferation and International Security division at the lab.

"It's quite a burden to live in that world."

New relevance, urgency

What happened Sept. 11 has altered the tenor and rhythm of days at Los Alamos, reinvigorating a symbol from history books that many Americans might have ceased to consider or might think of only as that ominous place where scientists dream up dark technology. Even veteran scientists, engineers and technicians at Los Alamos say they feel rejuvenated by the stepped-up relevance and urgency of their jobs, a feeling recently fueled by bin Laden's claim to have devastating weapons of his own.

"We know our mission now has a renewed sense of urgency," said Gil Garduno, 30, a nuclear-weapons engineer who wears jeans and hiking boots to work. "It brings it back to life how important it is."

Hawkins said, "I think all our people generally understand that we're in a race against the bad guys."

In addition to Hawkins' division, where hundreds of employees work to detect, deter and defuse everything from nuclear to cyberterrorism, Los Alamos houses the world's most comprehensive anthrax database--one that has 1,200 strains, according to Peter Lyons, science adviser for Sen. Pete Domenici (R-N.M.).

The lab also has computers that can simulate and predict the effects of a terrorist attack on the nation's infrastructure. The program stands to get an extra \$20 million from the new anti-terrorism act.

While none of these programs is new--the labs have long been involved in more than nuclear research, building databases on everything from AIDS to the flu--many have been accelerated, emphasized or redirected since Sept. 11.

The lab wants to build a research unit where scientists would work with live infectious agents such as plague, anthrax and tuberculosis, a proposal that has been received less than enthusiastically by those who think it is enough to have plutonium in their back yard.

The new, more secure unit would be the only such lab in the Department of Energy's complex and could give Los Alamos an even bigger role in the nation's burgeoning fight against bioterrorism.

"Maybe with all this there will be more money flowing into Los Alamos," said Ernest Lujan, whose barbershop Los Alamos employees flood at lunchtime.

So far the benefit to Los Alamos has been an increase in morale. Workers throughout the lab have come to view old jobs in a new light and to attack them with new energy.

'They really buckle down'

Hawkins works with U.S. intelligence to develop, redirect and expedite technology that might help save lives. Since Sept. 11 he often is at the lab from 7 a.m. to 6 p.m., and then takes work home that he must keep secret even from his wife. He often works weekends.

"People in this division are working longer hours under higher pressure," said Juan Baldonado, a veteran mechanical technician in space sciences, which among other things has developed surveillance satellites. "People who work at the lab really like their jobs, and when there's a real need for something like this, they really buckle down.

"It's about like the military: Hey, we have a real purpose now."

The emerging image of Los Alamos as a valuable asset in the war on terrorism has failed to impress detractors, who hold the lab in contempt because of how much federal money it gets and what it is perceived to represent.

"I would say the people here are quite a bit less swept up in the vicissitudes of the moment than you might expect," said Greg Mello, head of the **Los Alamos Study Group** and a frequent critic of the lab.

"I think there is a little more acceptance of things military probably right now," he said. "But there's really quite a bit of skepticism about the political uses of Sept. 11. And there's a lot less to the lab's touted accomplishments than meets the eye. It's been hard to recruit good people to make weapons of mass destruction for a long time."

The uneasy relationship northern New Mexicans have with the lab began in the early 1940s, when a top-secret collaboration of some of science's brightest minds led to the development of the atomic bombs dropped on Hiroshima and Nagasaki, Japan, in 1945 and gave birth to the town of Los Alamos.

Even today Los Alamos is home to one of the highest concentrations of PhDs on the planet, scientists who not only developed atomic weaponry but also have in recent years pioneered research into AIDS, genetics and other fields. The complex covers some 43 square miles and employs roughly 7,000 researchers and support personnel.

The city itself has a population of about 11,000 people, most of whom work for the national laboratory or for businesses that directly support the facility.

On the outskirts, in a house with a breathtaking view of the Rio Grande cutting through a mountain canyon, lives 81-year-old vintner John Balagna, a retired chemist who worked on the Manhattan Project and who now makes a wine he labels "La Bomba."

"We had a lot of smart people here during World War II," Balagna said. "In two years we went from nothing to nuclear weapons. But there weren't any secrets; it was just fact. Anyone with scientific knowledge and smarts was going to figure it out eventually."

Familiar feeling

Betty Lou Stein, 76, remembers the fear of moving to Los Alamos in 1948, when her husband joined the lab's security team. "My mother was frantic," she said. "She told me, 'My God, you're living on top of a time bomb.'"

Almost 60 years later, Stein is ill at ease once again over living in Los Alamos.

"We're upset because of what happened Sept. 11," she said. "We don't know that Los Alamos won't be a target. The day the attack happened, I said to my husband, 'Oh my God, are we going to get it?'"

At Ernie's Barber Shop, the mood has mellowed since the attacks, and the Los Alamos employees who keep the chairs warm at lunchtime are taking the threat of terrorism in stride.

"I'm noticing more of a presence of guards at in the lab, but I don't think anybody is really fearful that Los Alamos will be a target," Garduno said, taking a mirror from Lujan to check his haircut.

"Looks good, thanks," Garduno told the barber.

Then he headed back to work at the lab.

Author: Robert L. Kaiser, Tribune staff writer.

Section: News

Page: 4

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# Anti-Terror Work Revitalizes Lab

## Sept. 11 Affecting Rhythm at LANL

BY ROBERT L. KAISER  
*Chicago Tribune*

LOS ALAMOS — This is a place where the mundane and the unthinkable are hopelessly tangled, where scientists who get \$10 haircuts at lunchtime design devastating weapons in the afternoon, and men spending retirement in the craggy mountains remember working on the Manhattan Project.

Los Alamos National Laboratory, birthplace of the atomic bomb, still gives some around here the creeps. But in a twist brought about by the specter of terrorism, many workers in the mysterious, low-slung buildings and metal trailers are working overtime trying to save the world from weapons of mass destruction. And the nuclear age Los Alamos helped usher in nearly 60 years ago occasionally comes back to haunt employees such as Terry Hawkins, whose job sometimes requires him to imagine what Osama bin Laden might do next.

"We sit around and think of these very bad things, and we dare not tell anybody," said Hawkins, the director of the Nonproliferation and International Security division at Los Alamos.

"It's quite a burden to live in that world," he said.

What happened Sept. 11 has altered the tenor and rhythm of days at Los Alamos, reinvigorating a symbol from history books that many Americans might have ceased to consider or might think of



KRT PHOTO SERVICE

**WORKING LONGER HOURS:** Juan Baldonado, a veteran mechanical technician in space sciences at Los Alamos National Laboratory, says scientists, engineers and technicians feel rejuvenated by the stepped-up relevance and urgency of their jobs following the Sept. 11 terrorist attacks on the country.

only as that ominous place "on the hill" where scientists dream up dark technology. Even veteran scientists, engineers and technicians here say they feel rejuvenated by the stepped-up relevance and urgency of their jobs, a feeling that recently has been fueled by bin Laden's claim to have devastating weapons of his own.

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The emerging image of Los Alamos as a valuable asset in the war on terrorism and the defense of American lives has failed to impress its detractors, who hold the lab in contempt because of how much federal money it gets and what it is perceived to represent.

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# WE APPEAL FOR RESTRAINT

We, the undersigned, extend our deepest sympathy to the victims of the September 11th terrorist attacks. We call on our elected leaders to respond with the utmost wisdom—and restraint—to these acts. We must bring the guilty to justice, but we cannot kill innocent men, women, and children. To do so would betray our deepest values. Such a course of action could very easily draw us into a spiral of violence that would truly destroy our security, undercut our humanity, and damage our democracy far more than could any terrorist act. To lure us into a vengeful response may well have been a goal of the attackers. We must resist this temptation. No terrorist attack from the outside, however severe, can destroy America. Only a betrayal of our core values could do so. For this reason, we must also be especially careful to protect the constitutional rights of all Americans—especially Arab-Americans, who are now vulnerable to unwarranted accusation, discrimination or worse. We need to strengthen civil liberties, not abridge them. If we wish to be a truly great democracy, secure from fear, we must have the courage to lead the world in the paths of justice, not those of violence.

*This petition for restraint was opened for signature on September 13, 2001. It gathered more than 4,000 names before it was formally retired a week ago. The most recent 640 signatories are listed below. This petition expresses a concern felt by many Americans that U.S. military adventures, whether "successful" in the short run or not, cannot bring security, especially if they are unaccompanied by serious and concerted action to redress injustice. As 104 Nobel laureates put it in a statement issued last week, "The most profound danger to world peace in the coming years will stem not from the irrational acts of states or individuals but from the legitimate demands of world's dispossessed.... It is time to turn our backs on the unilateral search for security, in which we seek shelter behind walls." Violence cannot bring security. Only justice can do so, as these signers attest.*

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Karna Anderson  
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Nicole Anderson  
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Stardancer  
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Anna Walton  
Honey Ward  
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**FREE!**

**Citizen Inspection and Tour of  
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9:30 am - 2:00 pm

Meet at DeVargas Mall North to carpool at 9:30 am  
(north of construction site, by the Chamber of Commerce)

Interested citizens are invited to accompany Study Group staff and visiting experts for an informative tour and roadside inspection of key sites at LANL. At each laboratory site we visit, subject-matter experts will speak and answer questions posed by members of the public. We will be joined by two visiting experts:

- \* PETER STOCKTON, former senior advisor to Dept. of Energy Secretary Bill Richardson on the physical security of the U.S. nuclear weapons complex.
- \* EDWARD HAMMOND from the Sunshine Project, an expert in biological weapons treaty compliance and biotechnology issues.

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7:00 pm, Unitarian Church, Santa Fe  
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# Spring near LANL tests for contamination

12/14/01

By JEFF TOLLEFSON  
The New Mexican

Los Alamos National Laboratory failed to notify the state until September that water samples taken from a spring last fall and this February turned up positive for perchlorate contamination, according to the New Mexico Environment Department.

Officials with the laboratory, the state and the U.S. Environmental Protection Agency are now testing water samples from a spring near the mouth of Pajarito Canyon on the west side of the Rio Grande River. Steve Yanicak, who manages the Department of Energy's Oversight Bureau in White Rock, said he has yet to see the results from any of the current tests.

Yanicak said the laboratory and his agency have an agreement to notify each other when contamination is discovered during testing. He said his agency was angry the laboratory neglected to follow that agreement.

"We did have meetings with Los Alamos about the non-notification, but we seemed to have worked it out diplomatically," he said Thursday. "There was probably some kind of communication breakdown during that time on the part of LANL."

A Los Alamos spokesman said water-quality officials would not be available for comment on the subject until today.

Local activists seized on the information as evidence that more testing is needed and criticized the laboratory for failing to notify state officials for nearly a year after initial tests found contamination.

"The good news is shared. The bad news, apparently, is not," said Greg Mello, who heads up the Los Alamos Study Group. Mello said it's a reminder that other bad information "has likewise not been shared with the state."

Perchlorate is a chemical used in propellants and other industrial processes. The laboratory measured perchlorate levels around 6 to 8 parts per billion in October 2000 and February of this year, Yanicak said, but testing for such low levels is difficult and can produce "false positives."

"We're still in the investigative mode right now," Yanicak said, noting the current round of tests employs a new and more accurate method of testing that should help confirm if contamination is present.

Federal regulators are studying perchlorate, which has been associated with thyroid problems, but have not proposed a drinking-water standard for the chemical. Yanicak said he doesn't

believe the state of New Mexico has a health standard for perchlorate in the groundwater. Other state officials could not be reached for confirmation, but Yanicak noted that Texas recently lowered its drinking-water-level standard from 22 to 4 parts per billion.

Either way, he noted, the primary goal at this point is to discover whether the contamination is there, regardless of a debate over health risks. If the presence of perchlorate is confirmed, then the agencies will boost testing to find out the extent of contamination.

The springs that run along the Rio Grande River are generally considered the "last line of verification" regarding contamination at the laboratory, Yanicak said. According to this logic, groundwater from below the laboratory generally moves downhill toward the Rio Grande; any contamination that is reaching the river should show up in the springs.

Yanicak noted that LANL runs a battery of tests on almost 20 wells each year; NMED conducts its own tests on a small number of the same wells to ensure the tests are conducted properly.

"With the exception of this perchlorate, we've never had any whistles and bells go off that we need to go in there and do a lot of sampling," he said. "This is the first time we've had to go in there and do any verification testing."



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# Santa Fe El Norte

**B**

THE SANTA FE NEW MEXICAN

**Saturday**

DECEMBER 15, 2001

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## LANL contamination still in question

► *EPA, lab offer mixed results in latest round of perchlorate tests*

12-15-01

By **JEFF TOLLEFSON**  
 The New Mexican

The water only got muddier on Friday, as federal officials released mixed results from tests for perchlorate contamination in springs east of Los Alamos National Laboratory.

Laboratory officials announced that no contamination was found in water samples taken on two occasions this fall from a spring near the mouth of Pajarito Canyon on the Rio Grande.

Initial results released by the U.S. Environmental Protection Agency, meanwhile, turned up positive for perchlorate contamination in more than one well in the area.

Rich Mayer, a senior environmental engineer for EPA in Dallas, said the agency's results came in right at the detection limit — ranging

from .4 to .64 parts per billion. Such results push the limit of the sampling technology. No contamination was found in samples taken further upstream and across the river from water wells that serve the city of Santa Fe, Mayer said.

Two samples taken from adjacent springs during the last year turned up 6.6 and 8.5 parts per billion of perchlorate, a chemical that is used in chemistry labs that handle radioactive substances.

The results raised red flags because such contamination would,

if confirmed, be entirely new in the area. The springs are more than a mile from the laboratory boundary and even farther from possible sources of pollution. First and foremost is Technical Area 50, where liquid radioactive waste containing perchlorate has been dumped since 1963, according to the laboratory.

"This is not an imminent threat to public health," said John Parker, chief of the New Mexico Environment Department's bureau overseeing the U.S. Department of Energy's projects in the state. Rather,

Parker added, it is a sign that groundwater leaving the laboratory might not be as clean as previously thought.

New Mexico has no health standards for perchlorate, and the EPA has yet to set a federal standard.

The agency has provided an interim recommendation of 4 parts per billion, however, citing studies showing the chemical could cause thyroid problems. Texas recently dropped its health standard from 22

Please see LANL, Page B-4

## LANL

Continued from Page B-1

parts per billion to 4 parts per billion.

Laboratory hydrologist David Rogers questioned whether the springs are contaminated with perchlorate, noting that a larger sample of tests will be needed before any conclusions can be drawn. He also said the techniques used to measure the chemical are relatively new and often inaccurate.

Rogers compared the situation to weighing a fly with a bathroom scale; the method has to match the subject. He said the laboratory received inaccurate results when it sent out test samples that had been intentionally "spiked" with perchlorate.

information about the contamination was slow to surface, saying the lab has an excellent record of making all information — good and bad — available to the public.

Rogers said results from the two samples that tested positive for perchlorate have been available on the Internet since last spring. Additionally, the laboratory published that information along with all other sampling results from 2000 in an annual report on environmental activities.

Laboratory officials said they offered to meet with state regulators on more than one occasion to discuss general water-sampling issues before the September meeting, when the issue was specifically brought to state regulators' attention.

Steve Yanicak, who manages the state's Oversight Bureau in White Rock, agreed that both the testing methods and the results need to be verified. Until that happens, he noted, no one can say for sure whether perchlorate contamination is present.

Joni Arends of Concerned Citizens for Nuclear Safety said the positive tests for confirmation verify the need for the laboratory to conduct more groundwater tests along the river. She said the DOE has contaminated water sources at many sites across the nation.

Stressing the lab and the state have since worked out the problem, the Oversight Bureau's Yanicak said that account "isn't accurate." Quite simply, added Parker, the laboratory should have notified the state immediately after the initial sample came back positive.

Laboratory hydrologist Bob Beers said the Waste Management Group has created a new system that will remove "almost all of the perchlorate out of the water" discharged at the radioactive-liquid waste-treatment facility.

"I don't know why we think we are immune from contaminated groundwater," she said. "It's happened everywhere else."

Depending on the source of the perchlorate, she said, the contamination could one day extend close to the wells the city uses for drinking water. The wells may be on the other side of the river, making contamination less likely, but that does not alleviate the need for caution, she said.

Laboratory officials Friday also countered assertions by the Oversight Bureau that

On average, Beers said, the water discharged into Morantad Canyon at LANL contains approximately 250 parts per billion of perchlorate, which added up to a total of about 11 pounds worth last year. The new system should reduce that to about 4 parts per billion, he noted.

Although some pollution, including tritium, has turned up in the groundwater about 900 feet below the laboratory facilities, both state and lab officials agree the aquifer has, to date, proven remarkably clean.

# Chemical In Spring Water Investigated

12/15/01

## Lab Found Substance In Water a Year Ago

By JENNIFER MCKEE  
Journal Staff Writer

The water is about the only clear thing about Spring 4 these days.

Information from Los Alamos National Laboratory and the Environmental Protection Agency suggests the spring and another sister spring called 4B — both along the banks of the Rio Grande near White Rock — may be contaminated with perchlorate, a chemical used in experiments at Los Alamos lab.

And it's unclear — or at least in dispute — why Los Alamos lab scientists knew about the contamination for almost a year but failed to tell the New Mexico Environment Department about it until only weeks ago.

Dave Rogers, a hydrologist at Los Alamos lab, said the lab first found perchlorate at 8.5 parts per billion when the lab sampled the spring in September of 2000. As this was the first time lab hydrologists had found the chemical there, they retested a nearby spring — Spring 4B — last March.

The samples again came back positive; this time picking up 6.6 parts per billion of the chemical. It was unclear Friday, based on inter-

views with NMED and lab representatives, why a different spring was sampled.

The lab checked Spring 4 again this September and that time the samples came back negative. Finally, lab hydrologists, along with the EPA, checked Spring 4 for a final time last month. The results, Rogers said, show perchlorate at rates of less than 2 parts per billion.

But numbers that small are almost too small to be detected, and Rogers said he's not sure the current detection methods for perchlorate can reliably detect the chemical in such tiny quantities.

Neither New Mexico nor the EPA have a set safety standard for perchlorate, a nonradioactive chemical that has long been a staple of the lab's nuclear weapons research. Texas has a perchlorate standard of 4 parts per billion.

If the perchlorate really is in the White Rock-area springs, it might mean the chemical has infiltrated the region's deep aquifer and be new evidence of lab-derived contamination in very deep ground water, especially because it was found in two different springs at two different times.

The discovery, even if it wasn't certain, was enough of a red flag that hydrologists with the New Mexico Environment Department should have been alerted, said

See OFFICIALS on PAGE 2

## Officials Check Water In Spring

from PAGE 1

Steve Yanicak, manager of the department's DOE Oversight Bureau in White Rock.

The Environment Department and Los Alamos lab have an agreement to notify each other of noteworthy findings in air, water and soil sampling. But in this case, the Environment Department didn't learn of the contamination until September — about a year after the first findings of perchlorate in the spring water. Yanicak said this was the first time the lab had not notified the state department of significant findings.

Rogers said he and the lab never tried to hide detection of the perchlorate. He said the lab posted the findings on its Web site this spring, although Rogers wasn't exactly sure when. The findings also were published in the lab's Environmental Surveillance Report.

But that report didn't come out until this fall; roughly the same time Yanicak and his office learned about the contamination at a meeting. And Yanicak said he should have known about the findings as soon as the laboratory got their sampling results, sometime early in the fall of 2000.

"They blatantly did not notify us," Yanicak said.

Rogers said he tried several times earlier this year to get together with the NMED and talk about the perchlorate and the rest of the lab's findings, but he said NMED staff wouldn't come to meetings.

However, Rogers said he never specifically mentioned the perchlorate and Spring 4. But he said he intended to bring it up with all the rest of the findings at the meetings he wanted to have with NMED personnel.

Regardless, Yanicak said, higher-ups of the Environment Department, the Energy Department and the lab this October met to talk about the incident and came away with a renewed agreement to share important information. Yanicak said he considers the issue "water under the bridge," and wants to focus his energy on the perchlorate, which according to the Environment Department might actually be in two wells.

Rogers said Friday, and on this point the NMED agrees, that the findings are preliminary and perhaps so close to the detection limit that they may not show that perchlorate actually is in the springs.

Both he and the NMED said they'll be watching perchlorate in the spring and sampling it more to definitively say if the chemical is in the water. They'll also be working to find out where the water is coming from.

Broad consensus agrees that Spring 4 and other nearby springs — a cluster of them along the Red Dot Trail near White Rock — are fed by the regional aquifer, although no one is exactly sure. That deep ground water is some of the purest in New Mexico and used as drinking water for Los Alamos, Yanicak said.

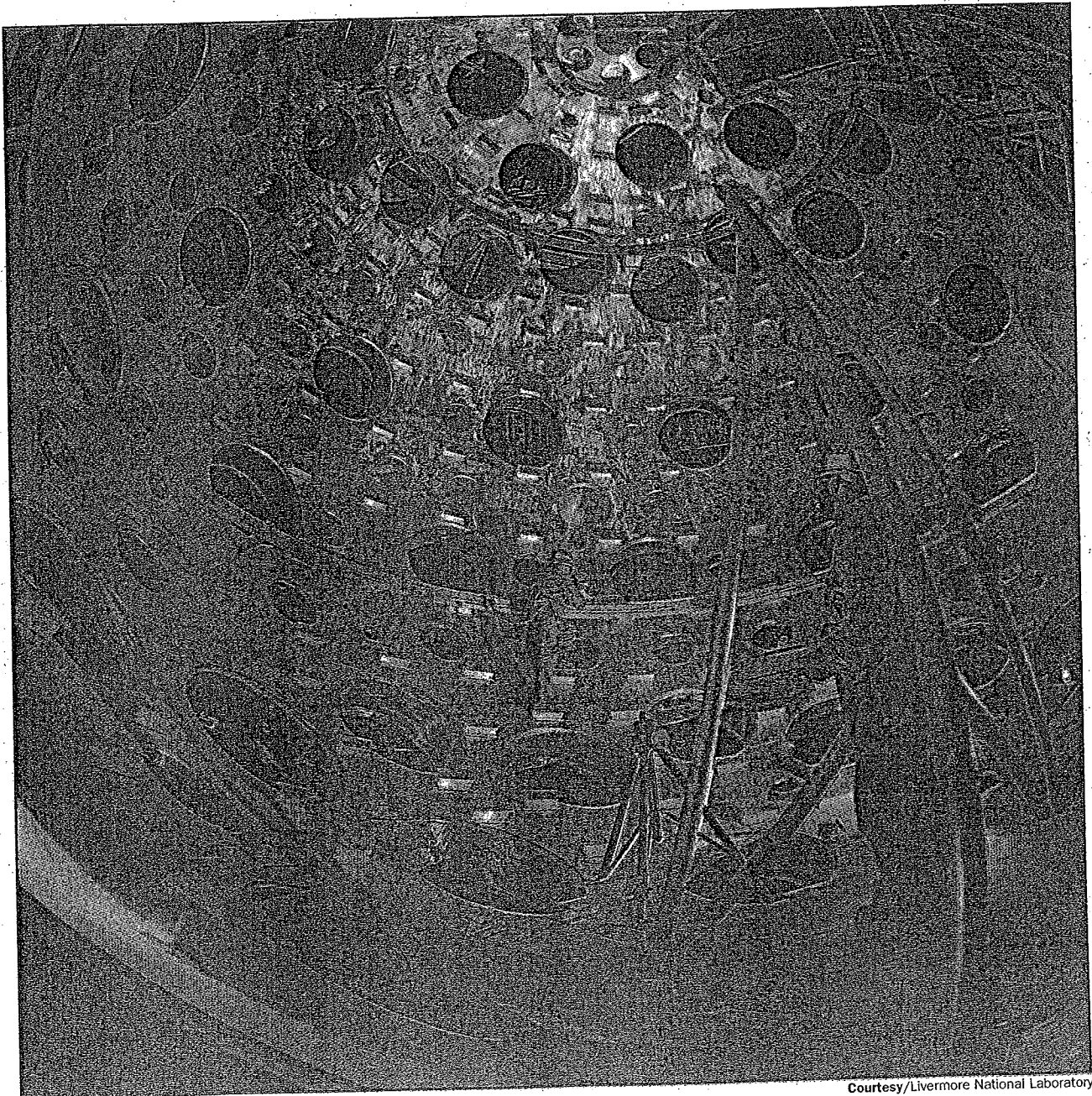
Contamination there, even if it doesn't pose any health risk, would show that lab-derived contamination has reached the water and alert both lab and NMED hydrologists to keep an eye out for other contamination.

They also need to find out whether the water feeding all the springs comes from the same source, indicating that perchlorate in Springs 4 and 4B would point to the same source of contamination. If the springs are fed from different sources, the fact that both turned up with perchlorate could be more of a

# IGNITING A FUSION FACE-OFF

Criticisms of the National Ignition Facility – a multibillion-dollar fusion energy venture at Lawrence Livermore National Laboratory – are becoming louder and more frequent as time and money are expended.

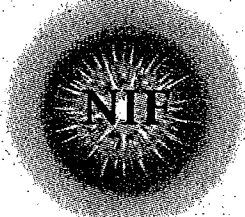
Ab. Tab  
12/18/2001



Courtesy/Livermore National Laboratory

Workers are dwarfed by the size of the multi-port target chamber of the National Ignition Facility fusion laser at Lawrence Livermore National Laboratory. The chamber, in which lab scientists are to conduct tiny thermonuclear implosions, weighs 1 million pounds and is 30 feet in diameter. NIF, meanwhile, is at the center of a debate over its cost and efficacy.

## CORE OF CONTROVERSY



The Albuquerque Tribune today begins an extensive series of articles on the National Ignition Facility, a controversial fusion energy laser and nuclear weapons blast simulator.

### TODAY

On Page A1: It's the nation's biggest science project, and it's under attack. In Insight & Opinion: A look at the insides of the giant laser and at how an Albuquerque lab and company are helping make it work.

### WEDNESDAY

On Page A1: The General Accounting Office targets NIF twice. In Insight & Opinion: An introduction to the organizations that are criticizing NIF.

### THURSDAY

On Page A1: Lawrence Livermore National Laboratory defends the biggest project in its history. In Insight & Opinion: Scientists find fault with the laser and the lab.

### FRIDAY

On Page A1: The equally controversial NIF prototype, Beamlet, flashes on in Albuquerque. In Insight & Opinion: Government and lab officials say NIF is the heart of nuclear weapon stewardship.

### SATURDAY

On Page A1: Congress takes heat over the fusion laser project. In Insight & Opinion: NIF's alternatives in the Land of Enchantment.

By Lawrence Spohn

LSPOHN@ABQTRIB.COM / 823-3611

LIVERMORE, Calif. — It's "Big Science," but scientific critics of the \$4.2 billion National Ignition Facility are legion from coast to coast, including many in New Mexico, where it casts a giant shadow.

The NIF nuclear-bomb simulator is a huge target. But the barbs fired at it — including some self-inflicted — have been deflected by a protective shield of national security that critics contend isn't earned or warranted.

It's still under intense siege, and in the aftermath of the Sept. 11 terrorist attacks, the anti-NIF assault seeks new life. Opponents argue that the project — which, they say, is already consuming billions of dollars needed for more compelling nuclear weapons programs and science projects, including some in New Mexico — should be canceled to fund the new and greater-priority anti-terrorism defense measures.

To date, however, even unflattering economic analyses and suggestions of favorable NIF political deals have been unable to deal the reeling project a knockout blow.

Here, east of San Francisco in a broad valley beneath the rolling coastal hills, the complex NIF is being built behind the security fence at Lawrence Livermore National Laboratory, one of the nation's three nuclear weapons labs.

Started in 1997, NIF is a giant laser that is to simulate nuclear weapons blasts in the laboratory. Its ultimate goal: fusion energy ignition — a tiny burst of the type of energy that powers nuclear blast furnaces such as the sun, stars and thermonuclear weapons.

Livermore expects NIF to cost about \$3.5 billion to complete, but independent government investigators say it will be at least \$4.2 billion.

NIF is the nation's biggest science project. It is to be the world's biggest, most powerful laser. It also is to be the world's

## About the laser

The \$4.2 billion National Ignition Facility is a complex machine that scientists hope to use to produce tiny blasts of fusion energy, the power source of the sun, stars and nuclear bombs.

**WHAT:** Fundamentally, NIF is an enormous laser that uses special chemically doped glass and unique crystals to generate powerful beams of light energy.

**HOW:** That energy is to be focused by 192 individual laser beams into a target chamber and onto a BB-sized pellet containing radioactive hydrogen, which, when super-compressed and heated, is supposed to ignite, yielding fusion energy.

**WHERE:** NIF is being built at California's Lawrence Livermore National Laboratory, with assistance from New Mexico's Sandia and Los Alamos national laboratories. They are the nation's three nuclear weapons laboratories operated by the Department of Energy.

**WHY:** Government officials say NIF is the core instrument of the nation's multibillion-dollar nuclear-science-based Stockpile Stewardship and Maintenance Program. Program scientists aim to maintain the safety and reliability of the nation's nuclear arsenal without nuclear testing, using the advanced experimental tools of nuclear blast simulators such as NIF and supercomputer simulations of bomb blasts based on past real bomb test data and the new simulations.

**ISSUE:** Various critics, including scientists in New Mexico, say NIF is too costly, won't work as promised and can't achieve ignition.

biggest optical instrument, dwarfing even astronomy's latest monster telescopes. And NIF easily is the U.S. nuclear weapons program's biggest star.

However, depending on the critic, NIF also is at least \$1.4 billion over budget, six years behind schedule, going to be an ignition dud and next to useless in its touted mission of maintaining the nation's aging nuclear arsenal.

Please see **FACE-OFF/A7**

Alb Trib.  
12/18/2001

**FACE-OFF** from A1

Physicist and budget analyst Robert Civiak says Congress has rewarded Livermore exaggeration, if not misconduct, about the project's prospects with more money for NIF and, through political arrangement, the entire nuclear weapons program.

Retired from the U.S. Office of Management and Budget, Civiak last spring did a detailed cost assessment of NIF that contends there are "\$1.5 billion in hidden costs" and that the project will cost \$5 billion or more just to build.

He sees NIF as a symptom of an ailing nuclear weapons program that is operating in the shadows, drawing more and more money from congressional patrons to do less and less work on a shrinking arsenal.

"A rising tide lifts all boats, and there's a lot of new money pouring into that program," says Civiak. "It's gross, and NIF is the poster child of waste and abuse in that program."

Critics contend NIF is virtually off the public's radar screen and still draws congressional support despite:

- Years of scientific controversy, including detailed critiques in prestigious scientific journals such as *Nature* and *Science*.

- Court cases that successfully challenged official reports and review panels favoring NIF as biased.

- Failure warnings from many scientists, including several in New Mexico, who believe NIF is the wrong project at the wrong time.

- Worries at Sandia and Los Alamos national laboratories in New Mexico that NIF's escalating costs will be at the expense of their budgets or erosion of the nation's basic nuclear weapons stewardship programs.

- Recommendations by both New Mexico labs that favored a "NIF-Light," one of several alternatives that would significantly reduce the laser's size, scope and funding.

- Stinging critiques by analysts for nuclear watchdog groups and individual scientists that contend Livermore has oversold NIF on unwarranted optimism, not firm science or technical merit.

- And a glaring Livermore management fiasco that two years ago sent the project into a tailspin, when the lab acknowledged rumors of NIF cost overruns, schedule delays, design errors and poor management.

NIF overseer George Miller, a Livermore Lab associate director, admits the lab made mistakes but says they were well-intentioned errors in judgment by scientists trying to be both project managers and engineers.

Citing as one example of reform the hiring of an external contractor, Jacobs Engineering, to do the laser beam path and power installation, Miller insists the troubled laser is "back on track."

Though many opponents roll their eyes at this suggestion and say that NIF not only isn't back on track but is likely to wreck, Miller's confidence is unshaken in the project, whose management he assumed after the budget and schedule revelations.

He says firmly that NIF's underlying and long-suspect glass laser technology is achievable at the giant scale, that "there is no question it will work."

Opponents say the project's performance to date and Livermore's history do not instill confidence. They had hoped to persuade Congress this year to reduce NIF's funding, scale it back dramatically and force an unbiased NIF review.

But both the House and the Senate funded DOE's request, appropriating \$245 million to continue NIF construction, plus another \$7 million for NIF target and diagnostic research.

Maryia Kelly, director of the Livermore citizen watchdog group Tri-Valley CAREs, says that for the last two years Livermore and DOE circled its wagons by instituting superficial management reforms and winning approval from new committees stacked with favorable scientists.

The result, says retired Livermore Lab laser scientist Ray Kidder, is that "the propaganda machine did its work" reselling a "slick" NIF campaign rooted in the misconception that it is vital to ensuring that U.S. warheads remain safe and reliable.

Kidder, who is largely credited with starting Livermore's military laser program nearly 30 years ago, still has access to the lab but not NIF. He says those doors closed on him after he published his own concerns about it.

"They don't want any more bad news," he says, "... and now they've set things up in terms of milestones, so they have a lot of wiggle room." Kidder says the new NIF strategy is to "go steady, go slow, and make sure we keep getting that money."

He and others contend that NIF and its proponents are hiding under a mantle of national security that to many weapons scientists is preposterous.

To these and a persistent storm of other NIF criticisms, Miller says the project will meet its new budget and schedule, will achieve its original goals, including fusion energy ignition, and remains vital to maintaining the nation's nuclear weapons arsenal.

"NIF's purpose is to help maintain the current stockpile by providing experimental evidence that small changes, which result from aging or refurbishment, do not exceed the performance margins of weapons as they were designed," he explains.

Miller insists NIF will provide a unique capability to the nation's nuclear weapons stockpile stewardship program.

The complex, multi-lab program is aimed at maintaining the safety and reliability of the nation's arsenal without further underground nuclear weapons test explosions.

Miller compares the care of the nation's aging nuclear weapons to building a new car, parking it in a garage for decades and expecting it to start right up when you need it.

He says for nuclear weapons to perform in this rigorous environment, scientists and engineers will have to monitor hundreds of components and materials, and NIF will provide experimental help in this complex effort.

Not true, insist Kidder and a number of weapons, laser and fusion energy scientists.

"They always say that," chides Chris Paine, a nuclear weapons analyst for the Natural Resources Defense Council. "But they never give you a single, concrete way in which NIF is going to make any weapon safer or more reliable."

Like Kidder, Paine looks beyond NIF's superlatives and sees a dark and deceptive reality: NIF is no longer just DOE's latest problem child but a national disgrace that cries out for tough congressional scolding and discipline.

Critics say NIF actually threatens the very arsenal it is being created to tend; could compromise U.S. nuclear weapons credibility; will fuel global nuclear nonproliferation; and tarnishes the integrity of American science and fusion research specifically.

"It is going to be a failure, but it will be a 20-year failure; and it will be too late to fix then. They will waste the people's money and compromise national security," warns Los Alamos fusion physicist Leo Mascheroni, NIF's most vocal and longstanding critic.

A 15-year advocate of an alternative fusion energy laser that has scientific support within Los Alamos Lab, Mascheroni charges NIF is but the latest in a five-decade history of unfulfilled fusion energy promises. He fears that when NIF fails, Congress will shut the door permanently on research that is vital to solving the emerging global energy crisis.

He says NIF remains saddled with

technical headaches, is too puny to reach fusion energy ignition, has virtually no role in keeping the nuclear arsenal reliable and safe, and likely will force the United States to return to nuclear weapons testing in violation of the nuclear Comprehensive Test Ban Treaty.

Across the country, fusion laser physicist Stephen Bodner says: "NIF is like the canary in the coal mine, and it's warning us that we are in trouble, that we are on the wrong track, but those in charge aren't listening."

Bodner, also a die-hard NIF critic, is retired from the Naval Research Laboratory in Washington, D.C., and now lives in Pittsboro, N.C.

He and Paine co-wrote an article in the British science journal *Nature* last fall that argued NIF is an example of failed scientific peer review. Scientists at all three labs say a conspiracy to protect NIF at all costs has contributed to severely compromising peer review among the secretive labs.

Citing a cascade of NIF technical problems, Bodner and Paine write in *Nature* that Livermore nevertheless was allowed to "fast-track" the project and that "advocates became captives of their own rhetoric, and dissenting voices were ignored."

"Whether they (NIF proponents) are right or wrong on NIF is not the issue anymore," Bodner now says. "It is their (Livermore's) unbridled optimism that is dangerous. Those people should not be in charge of our nuclear weapons."

Although Miller emphatically denies it, Bodner contends DOE's response to NIF's cost overruns and schedule delays is a "technical pass" that officially lowers the project's objectives and virtually eliminates any chance it had of fusion ignition.

For nuclear weapons critic Greg Mello of the Los Alamos Study Group in Santa Fe, the issue has become succinctly simple: The nation no longer can afford the giant laser.

The Sept. 11 terrorist assaults should push NIF indefinitely to the back burner, Mello says, affording Congress and the country a renewed opportunity to re-evaluate the floundering project within the context of honest peer review and its true value to the nation's security.

"The U.S. is going to have to make some investments in genuine security — I mean in terms of our real infrastructure, not hypothetical nuclear weapons machines," he says, referring to the new, vital and broad concern for homeland security.

"And these things are going to be expensive," he says, arguing for a new "NIF reality check."

Among those who think the end of the Cold War should mean a decline in nuclear weapons emphasis, Mello sees NIF as the project that is keeping Livermore Lab afloat.

The last of the big three weapons labs to be created, Livermore was established in 1952. Often, it has captured headlines with innovative

technical approaches outside of the traditional scientific box.

Several critics, however, say Livermore has acquired a storied reputation for exaggerating and pushing the practical applications of science — from recent "Star Wars" weaponry to exotic fusion energy machines, including NIF, that have not lived up to billing.

While Livermore officials defend their frontier scientific vision, Bodner says bluntly that it has acquired the reputation of "the lab that promises deliverables, but delivers promises."

Paine, Mascheroni and Kidder, in one way or another, say Livermore's unbridled NIF optimism borders on scientific deception aimed at preserving the lab in an era of dwindling nuclear weapons acceptance and a shrinking U.S. nuclear complex.

Here at the lab and in the community at large, there were shudders at the recent proposal by President Bush to include nuclear weapons facilities in a new round of military base closures.

"Without NIF, Livermore is nothing," says Mascheroni. "It has virtually no nuclear weapons mission. Eighty percent of the (warhead) designs were Los Alamos', and only a few of the remaining weapons in the stockpile are Livermore's."

Kidder says the problem became so obvious that DOE recently shifted responsibility for one of the Los Alamos weapon designs to Livermore "to kind of keep things balanced."

"Shades of Galvin," Kidder says, referring to the official Galvin Commission report last decade that suggested downsizing the nuclear weapons complex. Among the possibilities: consolidating the three nuclear weapons labs into just the two in New Mexico.

"Scared the hell out of Livermore," Kidder says, explaining "what everybody here knows: The truth is, Livermore is vulnerable without NIF."

DOE sees NIF as the "cornerstone" of the stewardship effort to ensure warheads are reliable and safe. DOE officials did not respond to repeated requests for interviews.

The first director of the new National Nuclear Security Administration, retired Air Force Gen. John Gordon, told Congress last spring that the project is "a vital element of the stockpile stewardship program." He testified that it will allow the nuclear weapons labs, among other things, to "study issues that affect aging and refurbishment of the stockpile."

Kidder believes otherwise and says there are plenty of scientists who agree. He described Gordon's and Miller's NIF stockpile claims as the equivalent of garbage, adding, "And the weapons people know it."

# Lab Anthrax Shipment Questioned

## Rep. Says LANL Not CDC-Registered

By JENNIFER MCKEE 12-18-01  
Journal Staff Writer

The Los Alamos National Laboratory may have broken CDC rules and misled the public by accepting a shipment of virulent anthrax in October, according to a congressman who helped sponsor the law outlining shipping rules about dead-

ly bacteria.

Rep. Edward J. Markey, D-Mass., sent letters Monday to Department of Energy Secretary Spencer Abraham and Tommy G. Thompson, secretary of the U.S. Department of Health and Human Services, questioning the legality of the shipment.

According to lab records, the shipping forms signed by LANL staff differed from the ones that came with the anthrax, which had "virulent" marked on them.

The shipment, as well as Markey's

questions, come at an especially controversial and busy time for Los Alamos lab.

LANL scientists, who developed a unique way of analyzing anthrax DNA, have been tapped to work on the federal investigation into anthrax contaminations by mail.

At the same time, the lab is planning an advanced biological research lab — a "Biosafety Level Three" lab — to pave the way for more advanced research on deadly bacteria like anthrax. Those plans

have sparked opposition from local lab watchdog groups.

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He said the lab already is regis-

tered with the CDC to receive virulent Ames anthrax.

### Public comments

Gustafson's explanation marked the first time lab officials have said publicly that LANL is registered to accept disease-causing anthrax. LANL representatives previously have said the lab has an internal policy of not working with virulent anthrax, but prefers to work with nonvirulent forms of the bacteria or anthrax DNA, which also can't

cause disease. The lab has cited that situation as one reason it would like to build the more advanced Biosafety Level Three laboratory.

Markey's office cited a Nov. 21 internal DOE report about the October shipment of virulent anthrax, which reads: "LANL is not currently registered with the Centers for Disease Control and Prevention to receive viable B.anthraxis for routine work."

See SHIPMENT on PAGE 3

# Shipment of Live Anthrax to LANL Questioned

from PAGE 1

Gustafson said that report was written with "the best information at the time," adding that the person who wrote the report may not have known LANL was registered to receive the Ames strain.

In his letters, Markey also questioned why lab representatives told attendees at a public meeting in Los Alamos on Nov. 15 that the lab doesn't work with virulent anthrax when the lab had already received one virulent shipment. His letter said Los Alamos was apparently in the process of getting a CDC waiver to accept more.

"Markey is assuming we were working with virulent anthrax, which we weren't," said lab spokeswoman Nancy Ambrosiano. "We weren't working with it. We received the package and destroyed anything that would be virulent in the package, including the wrap-

ping materials."

### Chain of events

According to the Energy Department and Los Alamos lab, the shipment occurred like this:

On Oct. 25, members of a Northern Arizona University facility working on the anthrax investigation faxed a copy of the required CDC shipping form to Los Alamos lab's Health Research Laboratory.

The form indicated that LANL would receive B. anthracis but didn't specify whether the anthrax would be alive. Paul Jackson, LANL's head anthrax researcher, signed the form as did the lab's institutional biosafety officer.

Before shipping the package, NAU tested some of the material to make sure it contained no live bacteria, a test that isn't required. The test came back positive for at least one living anthrax cell or spore. The

NAU staff stamped the package "virulent" and packaged it accordingly. The staff also apparently added the word "virulent" behind "bacillus anthracis" on the shipping papers. NAU staff later called the Los Alamos lab and alerted it that a potentially virulent package would be coming.

The package arrived the next day. Los Alamos staff put the material through a process that ensures no living or virulent material remains.

Because the shipping forms LANL signed and the shipping forms accompanying the shipment differed, the top technical adviser for bioscience at the DOE's Albuquerque office sent a letter to the CDC in mid-November saying the DOE and the lab knew of the discrepancy and were looking into it.

Technically, such a difference in forms violates CDC rules.

The laboratory didn't tell the public about the shipment until news of it leaked to the media, shortly after

the DOE letter.

Jill Trehwella, head of the lab's Biosciences Division, said the shipment was packed and handled correctly and no one was in danger. Her main concern was that the Arizona laboratory apparently didn't know that LANL doesn't accept virulent anthrax.

Trehwella said she called her bosses and asked for a 30-day review to explain exactly what Los Alamos lab does accept and make sure other research labs understand the situation.

Trehwella did say, however, that LANL has considered changing its internal policy against accepting virulent anthrax, if only for temporary periods such as the current anthrax investigation. Such a change would require some new equipment.

### Safety procedures

Karl Johnson of Placitas, the

virologist who co-discovered Ebola, praised the lab's handling of the anthrax, saying LANL's safety procedures are some of the best in the country. He is a member of the lab's Institutional Biosafety Committee, which reviews and authorizes proposed biological research.

Several lab watchdog groups said Monday that LANL hasn't been upfront about its anthrax research capabilities.

"Los Alamos was holding meetings with the public in which it explicitly said the (laboratory) building they wished to build was necessary to handle virulent anthrax," said Greg Mello, head of the Los Alamos Study Group, a lab watchdog organization.

He added that lab representatives also said as much to several members of his staff.

"They were, in fact, lying," Mello said.

Lab spokesman Gustafson said the lab has always told the public it follows CDC guidelines governing what kind of research lab — either the existing Biosafety Level Two or the proposed Biosafety Level Three lab — is necessary for anthrax research.

Gustafson said the lab has never hidden that point — although it always stressed that the lab doesn't like to work with virulent anthrax and was waiting until it had a BSL-3 lab before launching such research.

Lisa Cutler, a spokeswoman of the National Nuclear Security Administration, the arm of DOE that oversees the weapons labs, said she wasn't sure if Secretary Abraham had had a chance to read the letter.

"DOE and the lab are working together to review the circumstances of the shipment," she said.

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# Date--12/18/2001 Edition--Final Page--A1

## Legality of Anthrax Shipment to LANL Questioned

By Jennifer McKee Journal Northern Bureau

### Lawmaker Says Lab Not CDC-Registered

The Los Alamos National Laboratory may have broken CDC rules and misled the public by accepting a shipment of virulent anthrax in October, according to a congressman who helped sponsor the law outlining shipping rules for deadly bacteria.

Rep. Edward J. Markey, D-Mass., sent letters Monday to Department of Energy Secretary Spencer Abraham and Tommy G. Thompson, secretary of the U.S. Department of Health and Human Services, questioning the legality of the shipment.

According to lab records, the shipping forms signed by LANL staff differed from the ones that came with the anthrax, which had "virulent" marked on them.

The shipment, as well as Markey's questions, come at an especially controversial and busy time for Los Alamos lab.

LANL scientists, who developed a unique way of analyzing anthrax DNA, have been tapped to work on the federal investigation into anthrax contaminations by mail.

At the same time, the lab is planning an advanced biological research lab a "Biosafety Level Three" lab to pave the way for more advanced research on deadly bacteria such as anthrax. Those plans have sparked opposition from local lab watchdog groups.

Specifically, Markey's letters question whether Los Alamos was registered with the Centers for Disease Control and Prevention to accept virulent anthrax.

Lab spokesman John Gustafson said the lab's position is that LANL's current biological laboratory a Biosafety Level Two facility is adequate to work on small amounts of anthrax.

He said the lab is registered with the CDC to receive virulent Ames anthrax.

LANL registered

Gustafson's explanation marked the first time lab officials have said publicly that LANL is registered to accept disease-causing anthrax. LANL representatives previously have said the lab has an internal policy of not working with virulent anthrax, but prefers to work with nonvirulent forms of the bacteria or anthrax DNA, which also can't cause disease. The lab has cited that situation as one reason it would like to build the more advanced Biosafety Level Three laboratory.

Markey's office cited a Nov. 21 internal DOE report about the October shipment of virulent anthrax, which reads: "LANL is not currently registered with the Centers for Disease Control and Prevention to

receive viable B.anthraxis for routine work."

Gustafson said that report was written with "the best information at the time," adding that the person who wrote the report may not have known LANL was registered to receive the Ames strain.

In his letters, Markey also questioned why lab representatives told attendees at a public meeting in Los Alamos on Nov. 15 that the lab doesn't work with virulent anthrax when the lab had already received one virulent shipment. His letter said Los Alamos was apparently in the process of getting a CDC waiver to accept more.

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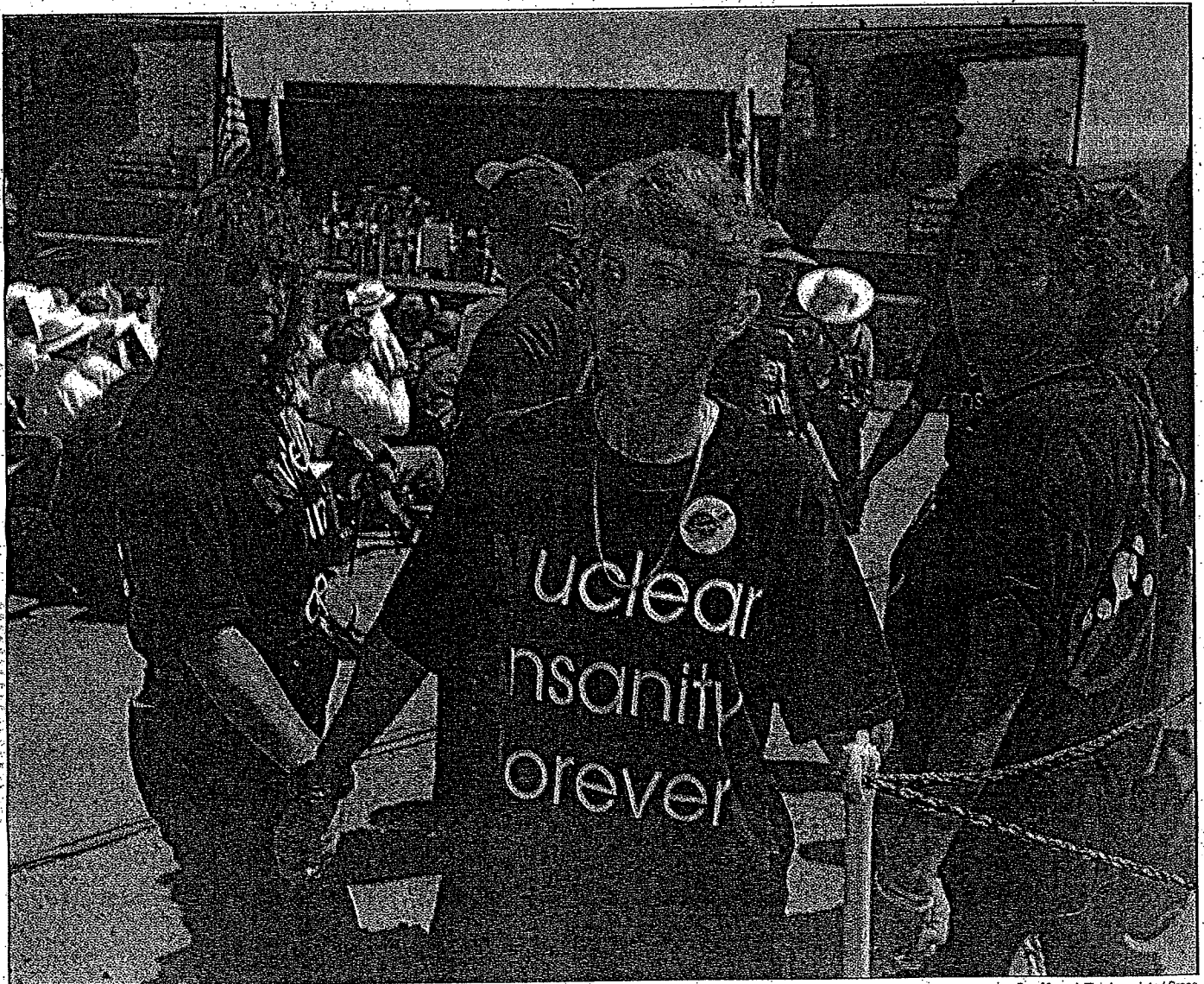
# INSIGHT & OPINION

Analysis, commentary and ideas

EDITOR: JACK EHN 823-3616, Jehn@abqtrib.com. DEPUTY EDITOR: LAWREN

## MEET THE OPPOSITION

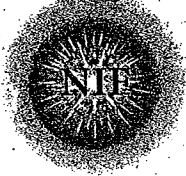
From nuclear watchdog groups to nuclear weapons scientists, NIF certainly has its share of adversaries. Naysayers claim the giant project is either a waste of time and money or just 'a big lie.'



Ben Margot/The Associated Press

Marylia Kelly (center), one of the most vocal critics of the National Ignition Facility fusion laser, joins hands with protesters in this file photo of a silent demonstration at the 1997 NIF groundbreaking. Kelly remains committed to her opposition, as do several other organizations.

## CORE OF CONTROVERSY



### What's NIF?

The National Ignition Facility is a 192-beam glass laser and nuclear weapons blast simulator, originally budgeted at \$1.1 billion for completion in 2002. It is:

- Under construction at Lawrence Livermore National Laboratory, east of San Francisco, since 1997.
- Over budget and now projected to cost at least \$4.2 billion to complete.
- Delayed and now scheduled to be completed in 2008.
- To cost \$150-million per year to operate.
- For simulating nuclear weapons explosions, instead of detonating actual warheads in tests.
- Primarily to produce fusion energy ignition but also will be used for basic physics, astrophysics and energy research.

By Lawrence Spohn

LIVERMORE, Calif. — On a bright day last summer, at a busy intersection south of Interstate 580, passing motorists were startled by a message taking on "the company" in this company town.

Screaming yellow against a deep, blue sky, a billboard at the intersection of Murieta Boulevard and Portola Avenue not only questioned nuclear weapons research at Lawrence Livermore National Laboratory but also targeted its biggest project ever.

Shouting, "Your mind is a terrible thing to waste," the 11-by-24-foot advertisement pictured the target chamber of the National Ignition Facility fusion laser.

Under construction a few miles away at Livermore Lab, NIF is a nuclear weapons blast simulator, the 30-year brainchild of laser fusion energy scientists, Livermore Lab, the Department of Energy and New Mexico's Sandia and Los Alamos national laboratories.

Livermore, Los Alamos and Sandia are the nation's three nuclear weapons labs, owned and operated by DOE.

Both New Mexico labs are doing work that supports NIF, even while raising their own concerns about the project's impact on the nuclear weapons program.

Sandia and Los Alamos also have been targets of similar anti-nuclear roadside rhetoric on billboards near the Albuquerque airport and along I-25.

But the Livermore billboard is the first to strike at NIF — the heart of the nuclear weapons stewardship program — to make the point that weapon scientists could be doing other nationally-important research and to exploit increasingly public differences within the nuclear weapons research community over NIF's real value.

While Los Alamos and Sandia have been less enthusiastic NIF cheerleaders, DOE and Livermore have told Congress and the White House repeatedly that NIF is a must-have for ensuring the safety and reliability of U.S. nuclear weapons, if the weapons labs are not permitted to test the

weapons themselves.

Opponents, however, see DOE and other proponents as Wizards of Oz, hiding the truth about NIF behind a curtain of national security and official reports they see as biased and self-serving.

"NIF is a big lie," says Marylia Kelly, director of Tri-Valley CAREs, the nuclear weapons watchdog group in Livermore that paid for the billboard.

**TODAY'S  
BYLINE**  
Spohn is The Tribune's senior science writer and deputy editorial page editor.

"NIF is not going to make our existing weapons any safer or more reliable," she insists. "It's intended to train the next generation of nuclear

weapons scientists in advancing nuclear weapons designs which we, and the world, don't need."

Kelly says taking on NIF hasn't been easy, because Livermore Lab is the major employer in this town of 74,000 people, where it has been an economic engine since the beginnings of the Cold War in 1952.

But NIF — to be the world's biggest laser when completed in 2008 — isn't just an economic boon to the lab or the city of Livermore.

It also happens to be the nation's biggest science project, and it has become a lightning rod for a variety of organizations and scientists from coast to coast, for a variety of reasons.

### 'Bloated mega-laser'

Among organizations that have NIF in their cross hairs are the Natural Resources Defense Council in Washington, D.C.; the Western States Legal Foundation in Oakland, Calif.; the Los Alamos Study Group in Santa Fe; the Physicians for Social Responsibility in Washington, D.C.; and the Taxpayers for Common Sense in Washington, D.C.

NIF tops Physicians for Social Responsibility's "Nuclear/Security" Internet Web

page, where the organization has encouraged people to call their representatives and senators to oppose NIF as "the biggest boondoggle in the U.S. nuclear weapons complex."

The organization argues that NIF is plagued by technical problems and is wasting taxpayer dollars; threatens U.S. commitments to prevent nuclear proliferation; and, contrary to government and weapons lab contentions, "is not needed" to maintain the U.S. nuclear arsenal.

It contends NIF experiments will "have nothing to do with safety — preventing accidental explosions or leaks in nuclear weapons — and very little to do with how reliably the weapons perform." These objectives already are ensured through ongoing, less expensive DOE operations, the group claims.

At Common Sense, an independent advocate for American taxpayers, NIF has become a poster-project of government waste.

This organization doesn't view NIF as a crucial tool of nuclear weapons science but rather as a "bloated mega-laser" burning up taxpayers' money.

In the budget surplus era, "It's been gift-wrapped and tied up with a beautiful bow," says Common Sense analyst Keith Ashdown, who says that in spite of a long, troubled history, NIF has risen from what should have been certain death two years ago.

"Here you have a project that is probably billions of dollars over budget, years behind schedule, highly controversial in the scientific community, challenged by the weapons scientists it is supposed to serve, the subject of a GAO (Government Accounting Office) report that said the lab misled Congress and the American people — and what does Congress do but throw more money at it," Ashdown says.

"It's indefensible," he says. "And on so many levels."

While he says critics are frustrated with

Please see NIF/C3

**NIF** from CI

the political and military power that Livermore and its managing contractor, the University of California, have wielded in Congress over the past several months to sustain NIF, the laser remains a prime target for budget cuts.

Common Sense has joined with the U.S. Public Interest Research Group and Friends of the Earth to challenge NIF in the groups' collective "Green Scissors Campaign."

It aims to focus public, Congressional and administration attention on government projects that the groups deem "environmentally harmful and wasteful spending" and worthy of being cut from the federal budget.

NIF currently is easily the most expensive project on Green Scissors' top-10 list, which recommends that NIF "be canceled and construction terminated" and that the nuclear weapons labs and DOE rely on "existing laboratory capabilities, rather than wastefully expensive facilities."

It describes NIF's value to maintenance of the U.S. nuclear arsenal as "dubious at best" and contends that insisting on funding NIF, "DOE is throwing billions of taxpayer dollars at an experimental program" that many scientists believe has little or no chance of reaching its prime goal of nuclear fusion energy ignition.

Green Scissors estimates that cutting NIF will save taxpayers as much as \$10 billion. Cutting NIF could save taxpayers much more, depending on whose analysis is used and whether it's credible.

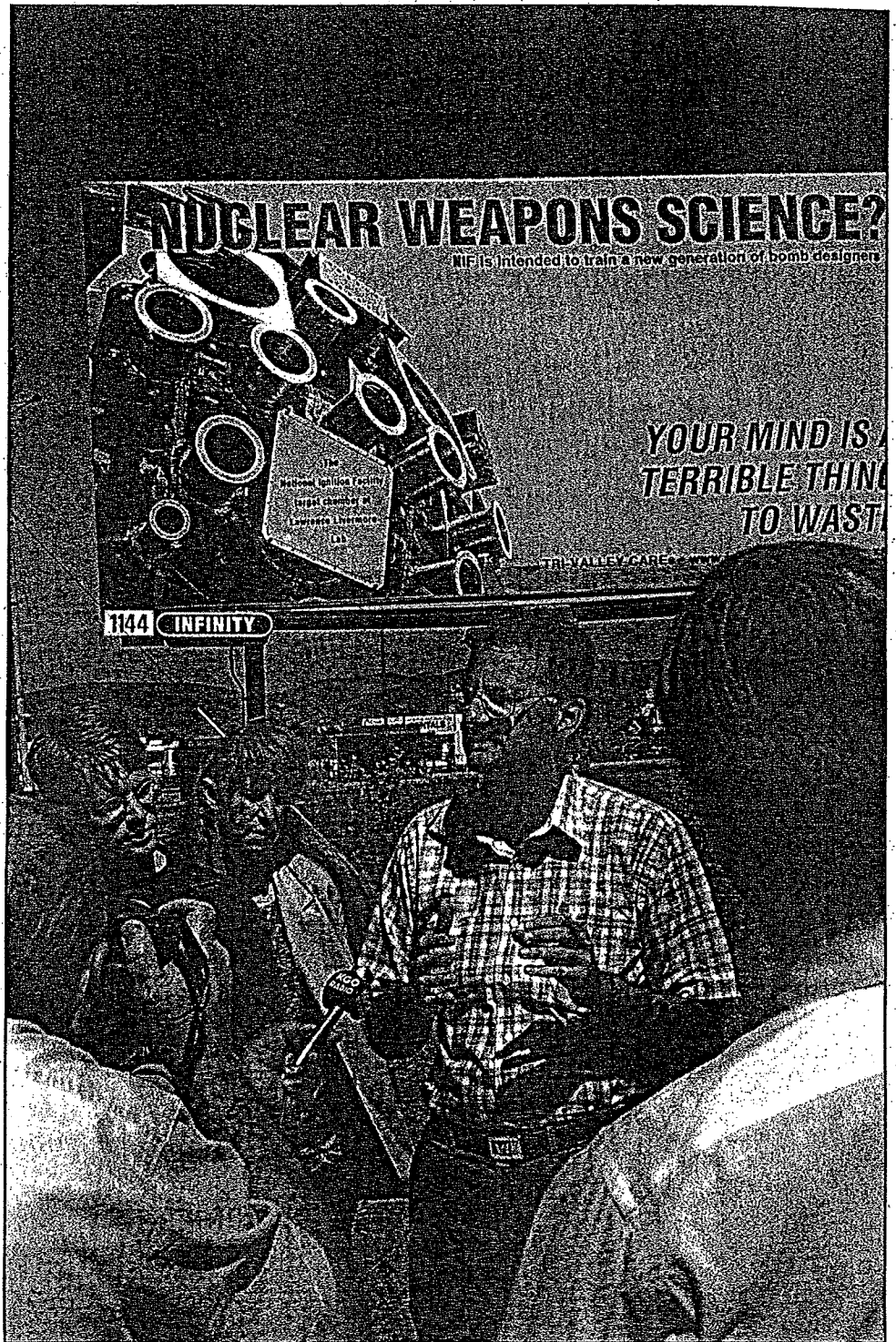
**Full accounting**

"Soaring Cost, Shrinking Performance" is a 64-page documented analysis of NIF produced in May by Robert Civiak, a retired analyst for the Office of Management and Budget.

It was funded by Kelly's Livermore-based nuclear watchdog group, Tri-Valley CAREs. She said copies were sent to members of Congress.

Civiak sets the tone in the first paragraph, charging that DOE "is keeping the full cost" of NIF from Congress and taxpayers.

He estimates the full, 30-year lifetime cost of NIF "comes to \$32.4 billion." That is six times what Congress was told by DOE in approving the project.



Lawrence Spohn/Tribune

Two scientists, Issac Trotts (left) and Andreas Toupadakis, who resigned positions at Lawrence Livermore National Laboratory in California, join Marylia Kelly in denouncing the lab's National Ignition Facility fusion laser during a media unveiling of a billboard criticizing the NIF project. Kelly is director of the nuclear watchdog group Tri-Valley CAREs in Livermore.

George Miller, Livermore Lab associate director and NIF overseer, calls that figure "ridiculous" and insists NIF is back on budget and back on schedule.

He says that Civiak's figure "would mean we would be spending a billion (dollars) a year, and the entire DOE budget for this kind of physics is only \$500 million (per year)."

But Civiak defends the estimate, saying that DOE and Livermore officially have given NIF a 30-year lifetime, and taxpayers are entitled to know the real NIF costs based on the likelihood that the project's technical problems continue to bloom.

He says that even after budget overruns and schedule delays were revealed two years ago, "DOE still significantly understates the likely cost of construction."

The Government Accounting Office, the investigative arm of Congress, has issued similar warnings that DOE has not had NIF costs independently assessed. Indeed, the same investigators have twice warned in successive reports that NIF as a complex technical and scientific project has not been independently reviewed.

While DOE and Livermore insist the final bill for building the laser will be \$3.5 billion, Civiak calculates it will be \$5 billion. The General Accounting Office, which prepared two NIF reports for Congress, has consistently bumped its estimates upwards, finally settling on \$4.2 billion.

These estimates, however, assume "no more problems with NIF." But Civiak warns: "On the contrary, there is significant potential for future problems and delays" because of a number of technical uncertainties that plague the project.

Civiak also charges that "DOE has dramatically underestimated the operating costs for the NIF" by excluding overhead costs and much of the cost of the experiments planned for NIF.

Worse, he says, NIF's performance objectives have slipped at the same time. As a result, DOE in effect is turning the bargain Livermore had argued NIF would be into a taxpayer burden.

He says DOE does not now require NIF to reach even 75 percent of its promised key energy

and focus requirements on operational beam lines by 2006 — three years after the project was supposed to be completed and fully two years before new projections say it will be finished.

"We calculate that the output from the NIF laser will be only one-ninth the amount per dollar spent that DOE anticipated as recently as last year," he writes. "This represents a dramatic decline in the projected return on the taxpayers' investment."

While other analysts have reached similar conclusions, Livermore's Miller insists that original NIF objectives remain firm and that there has been no slippage in its ultimate performance expectations because of cost overruns or nagging technical issues.

But Civiak concludes that the combination and documented pattern of "increasing cost and declining performance expectations" for NIF are a compelling case, that Congress should stop it now and that "every taxpayer ... should work to cancel" it as soon as possible.

He says NIF should be subjected to an intense scientific review, followed by extensive Congressional hearings into its checkered history, because he believes the project's record shows it "is no longer justified, if in fact it ever was."

### Livermore shuffle

But Kelly says it will take substantial congressional education and leadership savvy for that to happen anytime soon.

She says both House and Senate leaders have been "fooled again" in appropriating funds for NIF by Livermore's public relations machinery and the oft-repeated message from DOE that NIF is vital to maintaining the nation's arsenal.

"Congress never seems to learn," she says, referring to what she calls Livermore's knack for "selling" big science projects for decades without producing the results to support them.

Most notable, she says, are the lab's "expensive and exaggerated Star Wars weapons programs." Among many failed Livermore projects she cites are:

- The X-ray Laser Space-based Weapon, which was to be powered by a nuclear weapon to shoot down

### Livermore Lab facts

Lawrence Livermore National Laboratory is one of three U.S. nuclear weapons laboratories. It:

- Is about 40 miles east of San Francisco in the small community of Livermore.
- Was established in 1952 as the third nuclear weapons laboratory — with Los Alamos National Laboratory in New Mexico being the first and Sandia National Laboratories in Albuquerque the second.
- Has a 2001 budget of \$1.32 billion, with more than a third of its nuclear weapons budget devoted to the National Ignition Facility fusion laser.
- Employs some 7,300 people, about 2,800 of whom hold scientific, engineering or other technical degrees.
- Is owned and operated by the Department of Energy and competes with Sandia and Los Alamos for funding.

nuclear-tipped ballistic missiles.

- Brilliant Pebbles, another anti-missile project in which small "kinetic kill vehicles" were to be used to destroy ballistic missiles.

- The Magnet Mirror Fusion Machine, which, like NIF, was supposed to lead to a civilian fusion energy power reactor.

- The Atomic Vapor Laser Isotope Separation Program, a high-tech process of separating uranium, whose mounting development costs and technical problems ultimately sank it.

- And NIF's predecessor, the Nova glass fusion laser, which itself was supposed to reach fusion ignition but fell woefully short of the mark.

While consuming billions of federal taxpayers' dollars, none of these projects fulfilled their ultimate goals, Kelly contends.

Livermore and many scientists believe Nova did achieve substantial scientific success and made the short wavelength, glass laser technology the military fusion research leader.

Kelly agrees but counters that the \$200 million Nova laser could have accomplished much more if it had not been scrapped for NIF, and, in any event, it "never even came close" to its prime mission of fusion ignition, the same mission NIF has.

Kelly and other critics believe the evidence is overwhelming that

Livermore — supported by a biased laser fusion energy community — prematurely rushed NIF into the appropriations pipeline when a myriad of technical problems were unsolved.

Stephen Bodner, retired laser fusion physicist with the Naval Research Laboratory in Washington, D.C., says that in scientific circles, Livermore's penchant for exaggeration has severely tarnished its reputation. But Washington seems oblivious to holding it accountable.

"They get away with it because they are a nuclear weapons laboratory," says Bodner, "and the perception is we need them, so we put up with it."

But, he says, NIF is so far outside the realm of reasonable that it is now incumbent on Congress to step in and downgrade the project to reflect its immature technical merit.

In their article in Nature last fall, Bodner and Chris Paine, nuclear weapons analyst for the Natural Resources Defense Council, recommended limiting NIF construction to just eight of its 192 laser beam lines until its various technical hurdles are overcome.

"Stop the project, and force them to test it, force them to prove that all the technical problems they say have been resolved are indeed fixed," he says. He says its time for Livermore: "to prove it or lose it."

Marylia Kelly said her organization is suing to get the documents she believes will show that Livermore officials knew for a long time that NIF was well out of budget bounds and likely to be seriously late, perhaps even before the project was officially funded by Congress.

"They slipped the schedule without telling anyone or accounting for it," she says.

"For a government report, we think the GAO was absolutely scathing on NIF," she says, though it appears to have had little impact on Congress.

"Not yet," she says.

### TAP IN

To comment on this topic, please write letters to the editor. Letters should be typed, double-spaced, on one side of the page. Address: TAP IN, c/o Abolition, 1100 E. 1st St., Suite 100, Minneapolis, MN 55414. Fax: (612) 338-3689. E-mail us at: letters@abolition.com

# Milestone at LANL

Last of 17,000 barrels of radioactive waste dug up and secured; project under budget and years early

12-20-01

By JEFF TOLLEFSON  
The New Mexican

Los Alamos National Laboratory has uncovered and secured the last of more than 17,000 barrels of transuranic waste that had been buried under mounds of dirt for up to 25 years. Ultimately, the waste is destined for the Waste Isolation Pilot Plant in Carlsbad.

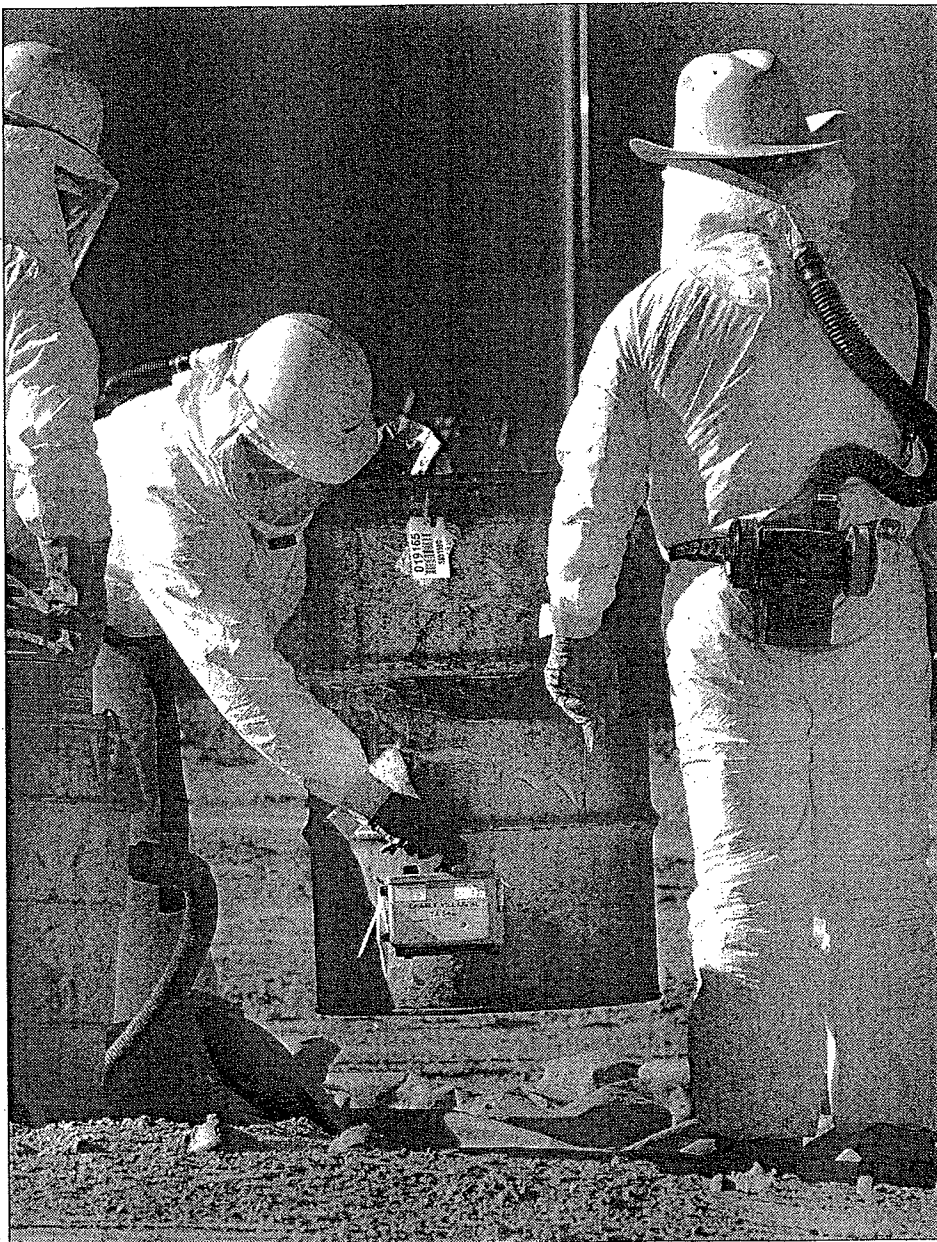
The project came in two years ahead of schedule and \$13 million under the initial budget projection of \$50 million. Project manager Gilbert Montoya called the accomplishment a "milestone." No radiation was released into the environment, he said. All workers came in well below the allowable annual worker-exposure limits, and the only reportable injury in six years was a sprained calf muscle, he added.

"That's quite a success," Montoya said Wednesday.

Lab officials celebrated the project's completion with a demonstration of the removal process at Area G. Workers in protective gear inspected and removed the last 55-gallon drum, which was under a tarp in the middle of an excavated asphalt pad. The drums, as well as about 200 fiberglass-covered boxes, are now stored in secure tent facilities, where they can be inspected regularly until shipment to WIPP.

The waste consists of everything from gloves and toolboxes to sludge that was solidified in concrete. The waste generally stems from nuclear-weapons research.

Beginning in 1970, when the Atomic Energy Commission ordered that transuranic waste be secured for ultimate disposal at WIPP, the laboratory began burying the waste underground for later retrieval. The drums were



Clyde Mueller/The New Mexican

Gilbert Yazzie, left, watches Rob Ruby, center, as he uses a radiological-survey instrument Wednesday afternoon to check the last 55-gallon container at the Los Alamos National Laboratory transuranic-waste-storage area. At right is Charlie Thorne.

stacked on three asphalt pads, separated by pallets and covered with a liner and dirt. Prior to that, all of the laboratory's solid radioactive waste was permanently buried in shallow pits — as is still the practice with low-level waste.

In 1992, however, laboratory waste handlers found

some corrosion when they inspected a series of the drums, according to lab spokesman James Rickman. He said the New Mexico Environment Department subsequently ordered the laboratory to remove the waste from the dirt-covered pads so it could be monitored more carefully

until shipment to WIPP.

A crew of about 25 people began digging up the first pad about six years ago, using a fabric dome to ensure that no radiation would escape into the environment. The laboratory discovered the drums were,

Please see LANL, Page B-4

# LANL

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Continued from Page B-1

for the most part, in good shape, so the dome was not used on the other two pads, Montoya said. He noted the last pad contained 7,300 drums and required only a year to complete.

Overall, about 30 percent of the barrels were placed inside 85 gallon "overpack" drums to ensure the contamination would remain secure, Montoya said, explaining that the

lab was conservative. Corrosion had not yet eaten holes in most of those, he added.

"We actually have drums that are in pretty good shape, for the most part," Montoya said, crediting a rust inhibitor that was sprayed on the drums prior to burial. "When and if we ever run into contamination, which we have, we are able to treat it" and continue operations "within an hour."

The announcement got a warm-but-cautious approval

from one of the laboratory's critics.

"The DOE deserves a round of applause for digging up those drums, which would rust and become irretrievable if they were left there indefinitely," said Greg Mello, executive director of the Los Alamos Study Group.

Nonetheless, he noted the lab continues to bury low-level waste that is nonetheless radioactive. Moreover, he said, the laboratory isn't digging up

transuranic waste that was buried prior to 1970 — in containers that are likely to corrode just like those unearthed during the current process.

"The earlier trenches and shafts might merit close attention as candidates for removal and encapsulation or deeper disposal," Mello said. "Right now, they are just covered with 3 feet of sand in an unlined pit. ... It's a WIPP site, basically, without any of the protections of WIPP."

## USA Today

US nuclear lab slows plans for biowarfare center

USA: December 20, 2001

LOS ALAMOS, N.M. - Los Alamos National Laboratory has slowed plans to build a new lab for testing live anthrax bacteria and other biowarfare agents to allow more time for public comment, lab officials said on Tuesday.

Because of a storm of concerned comment since a public meeting last month at which the lab presented its plan to its neighbors, the nation's leading nuclear weapons research facility said it was extending the period for feedback by about a month to Jan. 15.

Local critics say the government-owned and university-run lab, which sprawls across a mountain plateau next to the small town of Los Alamos, is exposing neighbors to potential harm and could violate an international treaty banning biological arms.

But lab officials say they need a so-called Biosafety Level 3 facility to handle live agents like anthrax as part of the nation's growing concern with defense against biological attack.

"We're just upgrading our facility and going to the next level. It's an extension of the research Los Alamos has already been doing," said Tracy Loughead, a spokeswoman for the U.S. Department of Energy in Albuquerque, New Mexico. The department owns Los Alamos, which is operated by the University of California, and will decide about building the new facility based on public comment and a possible environmental impact statement.

### MAINTAINS NUCLEAR STOCKPILE

The national laboratory's main mission is maintaining and preserving the nation's nuclear weapons stockpile. But it has branched out into related research fields, including some work on detecting biological weapons like the anthrax spores mailed in the United States after the Sept. 11 hijack attacks.

There are already hundreds of Biosafety Level 3 laboratories around the country, mostly at universities and private corporations, but this would be the first housed at a nuclear weapons research lab.

Los Alamos' proposed Level 3 lab would be a step up from an already existing Level 2 facility, which can handle noninfectious strands of DNA from biowarfare agents but not the live agents themselves. At Level 3, federally mandated precautions, including air locks and protective suits, are meant to keep bacteria and viruses from escaping.

Local critics of the project argue that putting a biowarfare research lab next to a nuclear weapons program is likely to lead to work on creating biological weapons rather than on ways to defend against them.

"There are also safety considerations because this lab does not operate itself safely and has endemic management problems," said Greg Mello, executive director of the Los Alamos Study Group, a citizen watchdog organization that which has monitored the national laboratory since 1992.

#### QUESTION ABOUT ARMS CONVENTION

Mello said that without stringent oversight, the national laboratory could be in defiance of the International Biological Weapons Convention, which forbids the development of biological weapons. The convention was signed into law by former President George Bush in 1989.

Lab officials deny there would be any treaty violation. "We do not make biological weapons," said the Department of Energy's Loughead, adding that the aim of the new lab would be to research the properties of bioweapons rather than to create any.

Officials are also planning to locate the biolab outside the secure nuclear areas that are closed to the public, allowing public access and monitoring of the lab's work.

John-Olav Johnsen, a senior technical adviser for the bioscience division of the Energy Department, said there were three potential sites for the 3,000-square-foot (280-square-metre) structure.

"There's not classified work going on. People will be welcome to come and get a tour," Johnsen said.

The building itself - projected to cost less than \$5 million - could be completed by 2003 and in full operation by the following year, he said.

Story by Zelig Pollon



# Can we trust Los Alamos Lab with anthrax? Should we?

By Kristen Davenport 12-29-01

SANTA FE — Way back in 1972, under the leadership of Richard Nixon, the United States and many other countries (including Iraq) signed an agreement.

The Biological Weapons Convention that year produced a treaty that said the undersigned countries would not build bio-weapons. No anthrax bombs. No smallpox cultures to wreak havoc on a world free of the disease. No mutant organisms to cause unimaginable suffering.

This, one would think, was a good thing.

The problem is: It seems very few countries paid an iota of attention to the treaty. It is well known that Russia, which also signed the treaty, had a huge biological weapons program in the Soviet era. Iraq clearly has some kind of biological weapons program.

In mid-December, various news organizations reported that Los Alamos National Laboratory had received a possibly illegal shipment of live anthrax in October, even as the lab's leaders asked the government for permission to build a biological laboratory where they could handle live anthrax (for research into defense against the organism, they maintained). Lab officials have been saying since last winter they aren't allowed to work with the live bacteria or receive shipments of it.

And they were fibbing. According to reports, on Nov. 15 Los Alamos officials held a public meeting about their proposed new laboratory and swore the lab wasn't receiving any shipments of the virulent organism — a month after they received one. On Oct. 21, a university in Arizona sent the lab a package with live anthrax. (The lab has been asked by the federal government to help unravel the mystery of who sent the Ames strain of anthrax to several news organizations and politicians earlier this year.)

After news of this October shipment leaked to the media, lab spokesman John Gustafson admitted that LANL had already registered with the Centers for Disease Control and Prevention to be allowed to receive live bacteria. (This was not clear to a congressman who says the lab cannot legally accept virulent organisms.) And, Gustafson said, the lab ran the live package through a machine that killed off any viable spores.

Either way, LANL still wants to build its high tech biological laboratory where it could legally work with live strains.

New Mexicans, of course, are not really consulted about whether they want the nuclear weapons laboratory in their back yard also toying around with dangerous and deadly organisms.

Los Alamos National Laboratory is not well known for telling the public the truth about what they're doing. Only in the last decade has information come out telling us the extent to which the Manhattan Project contaminated the soil and aquifer in the northern part of the state.

In the name of national security, documents not related to actual national security issues are often kept under wraps. Just this week, the Department of Energy newsletter, "Secrecy News," reported that the DOE (which runs LANL) has asked the Defense Nuclear Facilities Safety Board to refuse access of certain unclassified documents to anyone who asks for them.

In recent months, particularly since the terrorist attacks, DOE has made several reversals of open document decisions, closing off various means of access to unclassified documents about the environment, health concerns and other nuclear-related papers.

LANL says it has no intention of building any biological weapons. Officially, the government could not admit any such plans because we did, after all, sign that treaty saying we wouldn't.

But if the lab can lie so blatantly about what's going on, what makes us think they're telling the truth about using the bacteria only for purposes of building defenses against the organism? Why would we believe LANL is not building deadly bacterial bombs just miles from our living rooms?

A laboratory with a history of deceit and secrecy — even in areas where it doesn't pertain to national security — shouldn't be trusted with a biological weapons program.

Greg Mello, director of a lab watchdog organization known as the Los Alamos Study Group, says activists want the government to push for a strengthening of the international biological weapons treaty. Give it teeth. A treaty with enforcement built into it. A binding agreement.

The government says that is likely futile. And, if the way our own government is handling the current situation is any indication, it probably is futile.

But how can we expect countries such as Iraq and Iran to allow us to come into their borders and check up on their weapons programs when we could clearly be accused of being up to no good in our own country? Are we going to allow the Iraqi government behind the tall barbed wire at LANL to look at what we're doing there?

*Kristen Davenport is a syndicated columnist who writes for New Mexico News Services.*



# **fear and loathing in los alamos**

On the lam from the Cerro Grande fire



by Chellis Glendinning

According to Hindu philosophy, humanity is entering the Age of Kali Yuga. It's predicted as a time of chaos, death, and purification. If things are not up to snuff in the universe, it prophesies, we can expect the revenge of the deities. And we can expect the specialty of the age's own deity, Kali herself, and that specialty is *fire*.

Friday, May 5: The wind picks up over New Mexico's Bandelier National Monument that flanks Los Alamos National Laboratory (LANL) where nuclear weapons were first developed during World War II and are now researched, tested, and stored. The U.S. Park Service is nursing a nine-hundred-acre "prescribed burn" to clear dry brush from the forest floor. It flares up.

Saturday-Tuesday, May 6-9: Firefighters battle the blaze with helicopters, air tankers, bulldozers, shovels, and rakes. The fire is dubbed the Cerro Grande, after the nearby peak, and it is growing: 3,700 acres of park service and now national forest are incinerated.

photograph by Lewis Jacobs

Orion • WINTER 2001 [31]

## Wednesday, May 10: Winds gust chaotically

at fifty miles per hour. The fire leaps over containment lines and flies toward the weapons lab. At the western edge of the city of Los Alamos, the blaze bursts into a firestorm in the treetops. Firefighters hurl down their gear and flee for their lives, their hoses bouncing wildly behind the escaping trucks. Houses ignite. Some, the ones with propane tanks, detonate like bombs. Loudspeakers blare: residents are given fifteen minutes to evacuate. The fire reaches three LANL research areas, including the weapons-engineering tritium facility, Technical Area 16, also home to an enormous underground waste dump called Material Disposal Area R.

**The cloud of sometimes white,** sometimes red smoke has been streaming northeast of Los Alamos into the Chicano farming village of Chimayó, up the mountain to the forest pueblo of Truchas, and into southern Colorado, Oklahoma, and Kansas.

It's three P.M. I'm at home in Chimayó conducting a psychotherapy session with a client on the phone, and she is rapping away about her problems at work. The tube is on in the background, soundless but shrieking black

and white images of hundred-foot ponderosas bursting into flame. The smoke outside my window is blood red, and suddenly a caption appears on the screen: THE VOICE OF SENATOR PETE DOMENICI. I butt in: "I'm so sorry. Los Alamos is burning down. I have to end the session." In all my years of practicing psychotherapy, I have never done this. More red smoke wafts by the window. Another tree explodes, and the senator says something to this effect: The wind is blowing at sixty miles per hour, the fire's headed for the lab, we are grounding the slurry bombers, the firefighters are retreating, there's nothing more we can do—except pray.

Pray? There are 2,100 potential release sites in Los Alamos. There's radioactive stuff the scientists just threw into the canyons back in the 1940s. There are toxic dumps and decontamination facilities, incinerators and radioactive waste pits, shops for machining radioactive materials and decommissioned reactors. There's Tech Area 55, where weapons-grade material is fashioned into radioactive batteries, and a storage facility where nuclear weapons are shielded in concrete bunkers. There's Tech Area 15, a firing range where, over the years, 220 tons of depleted uranium and high explosives have been dispersed onto the open ground. And there's Tech Area 54, where 50,000 fifty-five-gallon drums containing chemical and radioactive waste are waiting aboveground for shipment to the Waste Isolation Pilot Project in southern New Mexico, and another one million drums waiting underground.

Strangely, as if in slow motion, I get up from the couch. I take out a nylon suitcase and, without emotion, place in it three pairs of jeans, three shirts, three sets

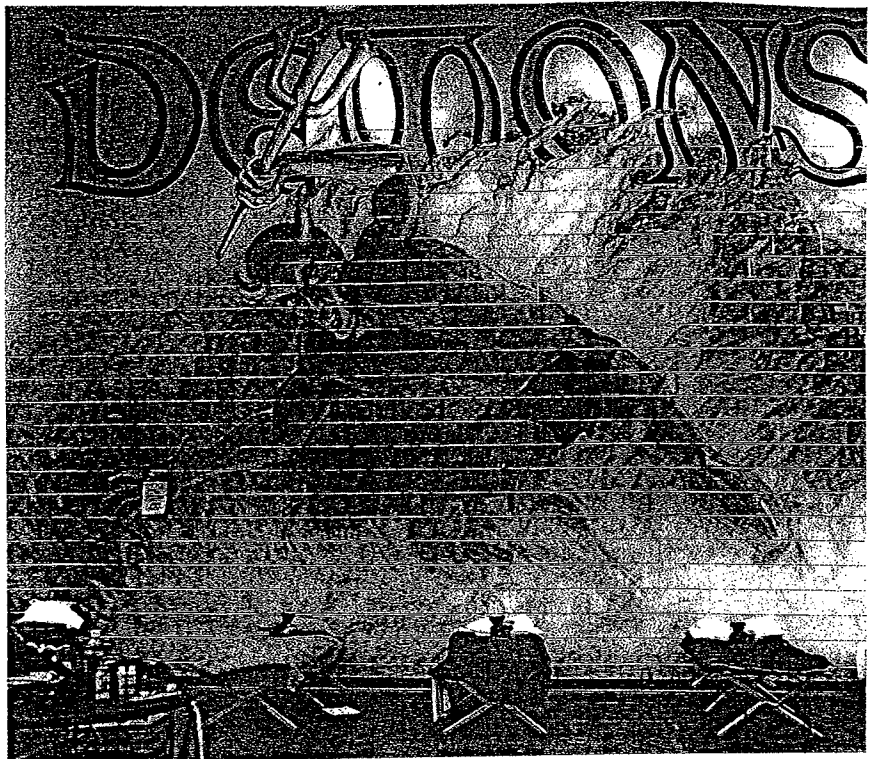
of underwear, and my cowboy boots. I do not pick out a meaningful photograph. Not even a teddy bear. *Nothing* meaningful. Then I walk out the door, climb into my 1977 Honda Civic, and drive into the smoke.

The wind is hurling itself toward the northeast. The evacuees have been sent south to churches, high schools, and hotels in Santa Fe. I aim toward the presumably clear air of the northwest. I have to penetrate the worst of the smoke plume to get there.

Things are eerie out here. Silence and a fog of ash hover over the Chevy pickups and lowriding Grand Ams creeping along Highway 76. I get to Española, the Chicano-Indian town immediately down the mesa from Los Alamos. A red-hot sun is just dropping behind the Jemez Mountains. Then I drive a few miles north and look back. I gasp. The entire valley, from Los Alamos in the west all the way up the Sangre de Cristo mountains to the east, is blanketed in black smoke. The faces of my friends in Chimayó and Truchas pass before my eyes. Linda Pedro. Max Cordova. Orlando and Mary. I do pray. I pray they have gotten out. In all, eleven thousand people from Los Alamos will evacuate. Another estimated forty thousand from White Rock, Española, the villages, Indian pueblos, Santa Fe, and Taos will pack up their jeans and cowboy boots and bolt for some semblance of safety. I am one of the those people.

The Abiquiu Inn lies one hill beyond the smoke. The sign—VACANCY—cackles fire-red, and I stop. An unshaven scientist type stands like a battered alien at the front desk. The clerk asks his address. "I don't think...I...have one," he spits out. I tell her I'm on the run too, and she gives me a room for free.

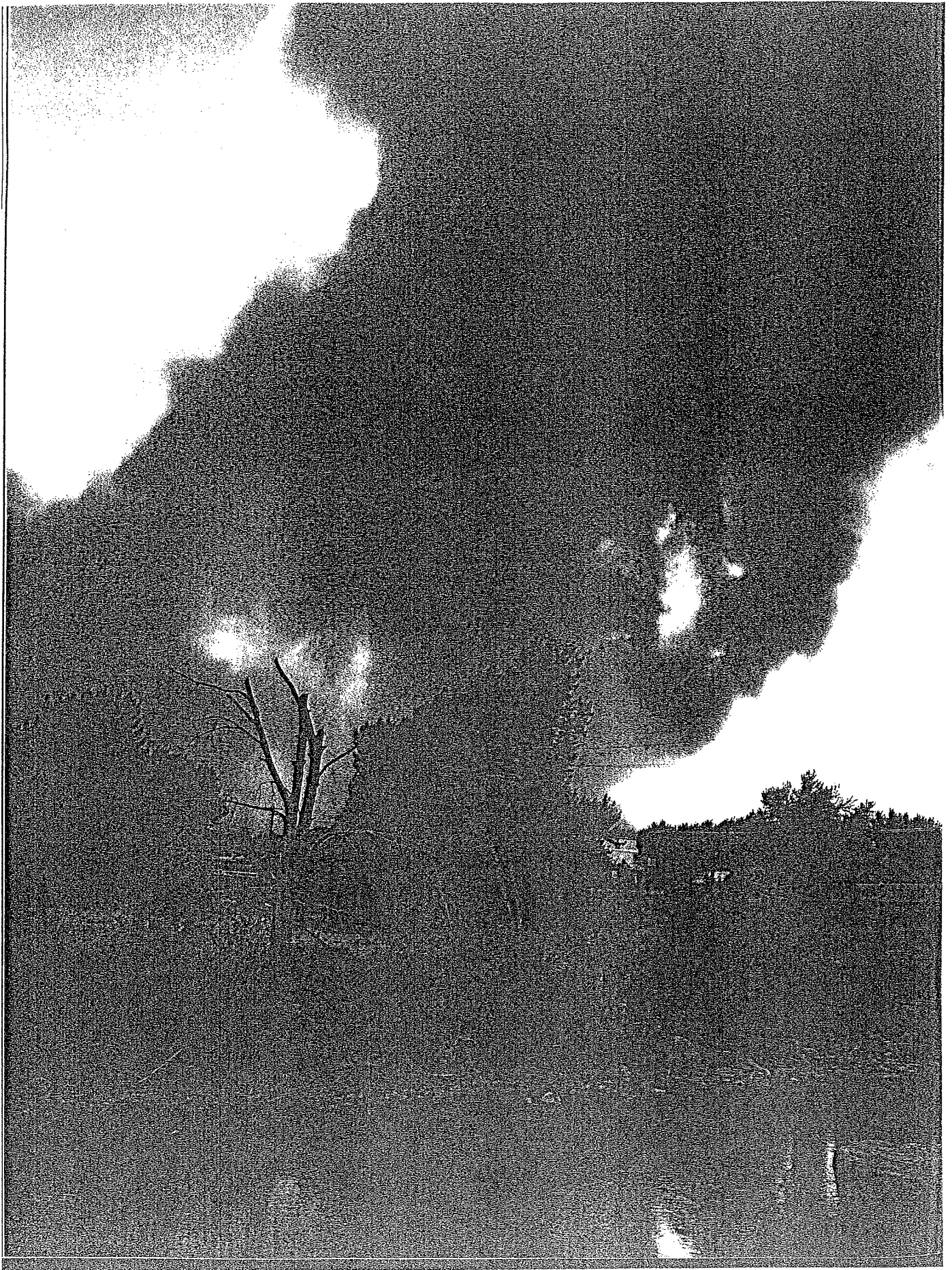
I try to turn on the tube. In some



unkempt stab at bringing modernization to New Mexico, the Abiquiu Inn has inserted Primestar where rabbit ears used to sit. You have to be a rocket scientist—which is what most of the other guests *are*—to operate the thing. I squint at the instructions, fumble with the buttons, and finally achieve a high-definition picture: but it's the news from...oh Lord...Atlanta, Georgia. At least the headline is the fire. I see the same exploding ponderosas and now, in addition, hundreds of houses going up. For my purposes of dodging the plume, though, I need news about the wind, the kind they broadcast out of Albuquerque, pinpoint doppler. There is no Albuquerque news. And as befits American television reporting, it seems that suddenly, miraculously in fact, there is *no nuclear weapons lab* in Los Alamos. There are

apparently only pine trees and private homes in Los Alamos now.

**Thursday, May 11:** The wind is back at sixty miles per hour. John Peterson of the Santa Fe National Forest announces that the fire is "zero percent contained." Twenty-five thousand acres are now gone—old-growth ponderosa and fir forests become stands of blackened skeletons; countless deer, elk, turkey, and owl burned to death or sent into terrorized flight. Two hundred and thirty-five homes in Los Alamos have been incinerated, three hundred others are damaged. Everywhere cars are melded into pavement. LANL deputy director Dick Burdick survives when the fire blazes right over his underground communications bunker. Reemerging to a scene of char and embers, he says, "This is what Hell looks like."



It's a catastrophe. A fire, yes. A terrible fire. But it also holds the possibility of being a technological disaster, maybe on the order of Three Mile Island or Chernobyl. I spent fifteen years in the antinuclear movement, along with the likes of Drs. Robert Jay Lifton, John Mack, and Hank Vyner, focusing our expertise as mental health professionals

tainty becomes the name of the game. My only lifeline is to call a friend. Luckily for me, my friends down in Santa Fe have placed themselves at the center of the firestorm: the antinuclear watchdog Los Alamos Study Group (LASG) headed by Zen Buddhist Greg Mello. Anthropologist Merida Blanco caretakes a meditation center in Santa

I'm feeling less spiritual about it. I think the guy deserves a standing ovation.

**The inn is morosely quiet.** The evacuees from Los Alamos are stiff, the anguish seemingly stuck in the marrow of their bones. The wind shifts from blowing toward the northeast to heading northwest. Primestar from Atlanta does-

## Should I stay put? Will the wind shift? And most important, *what's in the smoke?*

on the psychological ramifications of the arms race. I protested the weapons build-up of the Reagan years and later worked with Navajo and Laguna Pueblo uranium miners to gain compensation for cancer deaths. For my book, *When Technology Wounds*, I interviewed people made ill by exposure to health-threatening technologies: asbestos workers, Love Canal residents, Dalkon Shield Intrauterine Device users, electronic plant workers, downwinders, atomic veterans.

For survivors of invisible contaminants, I learned, outrage and uncertainty are the two predominant emotional ordeals. Outrage because the harm was human caused; it didn't have to happen. The Cerro Grande fire didn't have to happen: the park service didn't have to set it, and the Department of Energy (DOE) didn't have to neglect its contaminated sites all these years. Uncertainty because it is impossible to know what has happened or what will happen. Has exposure taken place? To whom? Where? To what extent? Will future health be affected? Are the land and water contaminated? Uncertainty is attended by fear and hypervigilance.

For me, sitting all fearful and hypervigilant on my motel bed, uncer-

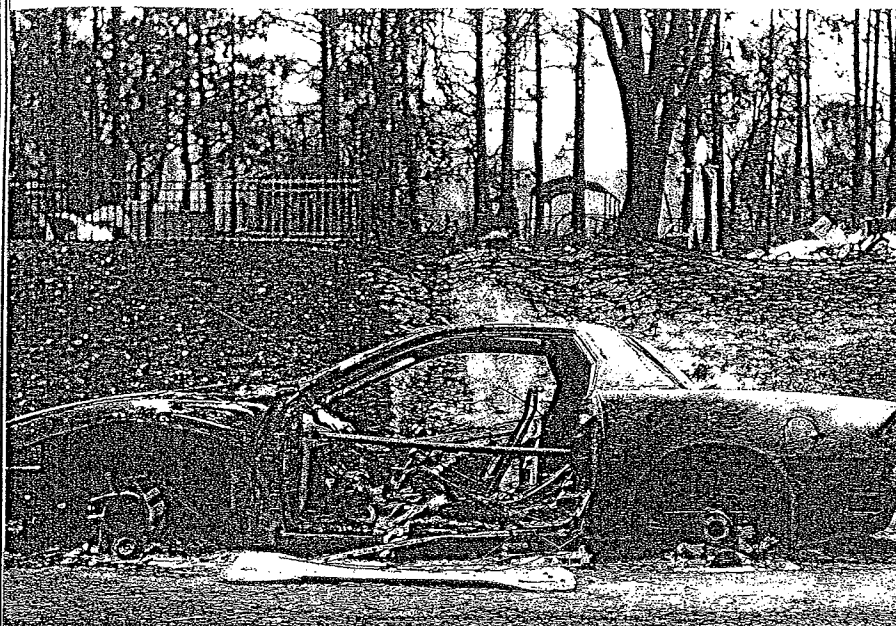
Fe and is waffling on whether or not to leave the state. Playwright Robert Shaw, in recognition of the devilish nature of the fire, renames himself "Dr. 666" and decides that his best bet at getting life-or-death facts is to act as Greg Mello's gofer.

Information is what we need and don't have. Should I stay put at the Abiquiu Inn? Will the wind shift? And most important, *what's in the smoke?* Uranium? Plutonium? Americium? Strontium-90? Beryllium? Tuolene? Dioxins? Hydrochloric acid? Asbestos? Is this the Chernobyl of the Age of Kali Yuga? Or is it, as lab public relations continues to insist, just a forest fire with no public health risk?

I told you Greg Mello is a Zen student. His most harrowing sesshin now lies before him. He takes three hundred dollars out of LASG's waning coffers and rents a Cessna 152 at the Santa Fe airport. Mello then flies *into the plume* with a Geiger counter. He returns with a numerical detail that is crucial for us all: at least in the parts of the smoke cloud he flies through, at the moment of his flight, there is no elevation of radiation. With this act, one wide-open eye is surely painted onto Mello's Bodhidharma doll, indicating the awakening long sought by Zen meditation.

n't tell me this; I get it from Merida. I determine to head north, straight up the middle, hoping to outrun the plume. But I am heading into territory I don't know. As I drive, I suddenly feel more solitary than ever. And more afraid.

The San Luis Valley of central Colorado is like a displaced piece of Iowa, all flat and spread out between the Sangre de Cristo and San Juan mountain ranges, speckled with cows and mobile homes whose roofs are held down by old tires. I pass through Antonito, Romeo, La Jara. Filling up the Honda, I have this vague memory of a town in these parts called Crestone. Determining to find it, I aim north, overshoot the Crestone turnoff, double back, rampage down the wrong dirt road, and land at the Willow Spring Bed and Breakfast, a funky Victorian hotel in the middle of nowhere. It is run by a couple of Tibetan Buddhist bodhisattvas whose dedication to hospitality includes a three-course breakfast of exotic fruits, home-baked pastries, organic eggs, and fine English teas. Nothing happens here. Except an antique wire raps against the brick exterior in an innocent fit of wind. Except I arrive in a whirlwind of stress and a relentless urgency to hog the inn's one telephone.



**Friday, May 12:** This is the big day. The fire has penetrated LANL, and it's zero percent contained. According to Lee McAtlee of LANL's Environment, Safety, and Health Division, "Half of what you think it's going to do, it doesn't do. And half of what you think it's not going to do, it sneaks up and does." It sneaks up and rages, at two thousand degrees, toward three inflammable sites. TA 55, home of the plutonium facility: the fire rips over the heads of the firefighters, encasing them in Kali's rage. It closes in on all but one side, and thanks to the vagaries of the wind and the courageous work of human beings, it draws within inches of the razor-wire fence—and stops. TA 54, where over a million barrels could explode transuranic waste into the air: some truly deft firefighting halts the inferno's advance within a half mile of the storage areas. TA 18, where nuclear experiments provide enough materials to make several bombs: the site is encircled by fire but

not engulfed. New Mexico Governor Gary Johnson calls the day "a miracle."

**With its temperamental** carburetor and miniature tires, the Honda miraculously rattles up a rocky road to the North Crestone Trail. I take a deep breath and embark upon what the innkeepers deem will be good for me: a hike. I head across a meadow, just now coming alive with spring wildflowers, and find a creek rushing down the mountain all cold and clear. Forging it seems a task I am incapable of enacting. I sit down on the ground. And then I see it. Lying on a piece of mica-flecked granite, a brand-new pair of elkskin work gloves. My first thought is not: Someone lost their gloves, I'll return them. It's not: Hot damn! Free gloves! No. It's: Don't touch those things, *they're radioactive*. Then the whole thing hits me. I burst into uncontrollable sobs. First, for the ponderosas and squirrels, the trout and deer. Then I cry for the park service administrator responsible

for the burn, how unspeakably tortured he must feel. Next, the evacuees at the Abiquiu Inn and all the hotels and churches in Santa Fe, the people whose homes are now rubble. Then I cry for my village. Are the river and forest contaminated? Will we be able to use the irrigation ditch again? Hunt elk? Grow corn? Will our lives ever be the same? Then I cry for myself. Will I have to leave Chimayó and the only life that holds meaning for me?

**Yet another emotional ride** accompanies this journey, and it isn't until I get beyond flight mentality that I sense its emergence. This one is made of conflicting realities, and the tension between them appears unresolvable. On one side, the psyche wants to believe in the comfy reality of normalcy. The fire is no big deal, it insists, that nasty plume of smoke foretelling doom is a normal cloud from a normal forest fire. The officials, after all, say everything's okay. My bodhisattvas at the inn, after all, seem untouched by fear.

Until Saturday, when suddenly every guest sitting around the breakfast table is an escapee from the fire. Conversation turns to Los Alamos. Enter normalcy's nemesis: the stripped-down reality of crisis. An older woman from Santa Fe was married to one of the early scientists at the Manhattan Project, and he died of a brain tumor. This fact reminds the couple from Taos of an epidemiological study a Los Alamos artist did revealing an inordinate number of brain cancers in his neighborhood. Everyone recalls cynically that, during Three Mile Island, the government did not deliver accurate information to the public. Nor during Love Canal or Church Rock or Times Beach.

Meanwhile, on the phone, Dr. 666 is



the man with the passion and the details. Shadowing Greg Mello, he seems to know whatever there is to know. Forty-two thousand acres are burned. The fire is only five percent contained. Twenty percent of the city is gone, thirty percent of the lab. Indeed, Tech Areas 54, 55, and 18 emerge unscathed. But the blaze eats up three

**In the face of fear** and no facts, rumors fly. A LANL scientist who lives forty miles from the lab measured his own house for radiotoxins—and fled. The state almost evacuated Santa Fe. The state almost evacuated all of northern New Mexico. The Russian government offered the U.S. some high-tech firefighting airplanes, and Washington

with ashen soils no longer anchored by trees and grasses. The whole transuranic stew could then flush into the Rio Grande and flow downstream—through eight pueblos, the cities of Santa Fe and Albuquerque, Texas, and all the way to the Gulf of Mexico.

"It doesn't sound good," I tell 666. My voice is hoarse.

## The blaze eats up three hundred sites with documented surface contamination.

hundred sites with documented surface contamination, including Tech Area 15 which is littered with chemical high explosives, toxic metals, and some 220 tons of depleted uranium. Tech Area 16's Material Disposal Area R burns and, with it, solvents, beryllium, uranium, and barium. Many of the homes that burned were built before 1980, meaning asbestos is flung into the wind. A Montana hotshot crew, Arapahoe and Cheyenne firefighting professionals, reports that the plume does not smell like forest fire smoke; it smells like chemicals.

The reality of crisis gouges into my being like fingernails in Play Dough. I awake each morning gripped with the thought that I have lost my home to contamination. I am eating like a wild boar and losing weight, sleeping ten hours and waking up exhausted. Merida tries to console me. The anguish will be relieved on Wednesday, she says. Irate with both the park service and the DOE, the New Mexico Environment Department (NMED) will issue its own report detailing radiological and chemical measurements of the air and, we hope, the soil and water. Then we will know, she says. I determine that on Wednesday I will decide if I can return home. Or not.

refused the offer. The park service administrator who okayed the prescribed burn is suicidal. The realm of scientific fact seems no more certain. The promised report doesn't come out on Wednesday. To our amazement, the NMED announces it is no longer working independently, but is now *in cahoots with LANL and the DOE*. For whatever it might now be worth, their joint report doesn't come out on Thursday. Or Friday.

Dr. 666 reports that forty-seven thousand acres have burned and the fire is now seventy percent contained. The laboratory is out of immediate danger. But the blaze has dropped into the canyons leading to nearby Santa Clara Pueblo. It rages now toward their sacred sites. And there's a new problem in view: runoff. The mountain above Los Alamos is completely denuded. In a few weeks, when the summer rains begin, floods could gush tons of mud down the barren slopes and into burned neighborhoods. It is projected that, if two inches of rain were to fall in one hour, the mud could take out Pueblo Canyon bridge. Or breach the Los Alamos Reservoir dam. The resulting wall of water could then spill like Pompeii's lava down the canyons and pick up the contaminants now mixed

"No. It doesn't."

"I thought I would know enough to make a decision about coming home by now," I say. "What *do* we know?"

"Nothing. Everything's a scenario. Nothing's tacked down."

He describes a community meeting pulled together by antinuclear activists and organic growers at the Cloud Cliff Bakery in Santa Fe. It is a scene of fear and anger. A farmer from Dixon shouts that the smoke smothering his village was neon orange. A Truchas man says he couldn't see through the floating ash to the hay bales in his yard. *What have we been exposed to?* everyone wants to know. Two officials from the NMED attend the meeting. They listen but say little.

"Come home." 666 surprises me. "The smoke is pretty much gone. When you see the place, you'll be able to make your own decision. Come home."

I don't really need more confirmation that we're living in a postmodern world, but here it is: choices of the most crucial import come down to personal perception. Until this moment, I have been pinning my future safety on some apparently impossible illusion of scientific certainty—the delivery of a tangle of statistics on a website, put together by a tangle of government types with a

driving motivation to avoid lawsuits. The truth is: I may never know.

**Friday, May 20:** I aim the Honda south. It sports three new cracks on the windshield and a multitude of new rattles emanates from somewhere in the rear. Indeed, when I pass Antonito mountain, the sky to the south is blue, with only a few whitish fire clouds riding the Jemez Mountains over Los Alamos. I enter the Española Valley through the old road at San Juan

local news, learn everything about the Los Alamos homeowners' tragedy—but nothing about possible contamination. Meanwhile, the fire finds its final resting place in the canyons above Santa Clara Pueblo, and indeed it destroys their sacred sites. The people are sent into a spiral of unspeakable grief.

Since the fire began, LASG has been busy conducting bird's-eye surveys of the fire, ascertaining facts from government agencies, being interviewed by the media, fielding a phone call every

chemicals. The radiation figures range from zero elevation to ten times normal. For chemicals, they show no elevation. But when were the samples taken? And in what locations? In fact, no government agency admits to taking measurements in the most affected places during the worst of the fire. Plus, a "deep throat" from the lab discloses to antinuclear groups that the monitors located in the most sensitive areas of the lab were not even functioning during the fire. Most of the fallout blew north-

## He looks me in the eye with his Zen grip. "What place *is* safe anymore?"

Pueblo. I am not prepared for what I see and feel. The air is crystalline. The valley is infused with the sweetness of the Russian olive blossom—and a monstrous human heaviness dwelling lower than the axles of a lowrider.

My house looks okay, except the soil in my garden has long since cracked dry and the plants withered into oblivion. I dedicate myself to leaving it as is—the 2000 Disaster Garden, I call it—dried-out seedbeds in testimony of the Cerro Grande fire. I surprise myself on Sunday when, like a mirror of disaster survivors everywhere, I wake up wanting flowers. To the vaqueros and farmers of the valley, a store that sells flowers, and from other regions to boot, is anathema to local ecology, and indeed the one-year-old Golden Leaf in Española has not been stampeded with business. But on this Sunday, the first calm weekend after the worst of the fire, the place is stampeded. Like me, everyone suddenly wants flowers.

**Uncertainty does not recede** because I am back in Chimayó. I pore over the newspaper, glue my eyes to the

minute from the public. I break into Greg Mello's swirl of urgency and take him to lunch.

He tells me that the NMED has, at last, posted some statistics on their website. But there are problems with the figures—the main one being that they may not be accurate. The problem is not new to LANL. If you want to know where old dump sites are or the location of a weapons bunker, you're faced with a purposely tangled labyrinth of numbers and details. Greg has been studying LANL for a decade, and he still doesn't have a comprehensive picture. As to facts about the fire, he describes the problem as "a military-like clamp on information." Thirty percent of the lab and forty buildings burned, he says, and yet the media was told that only a couple of trailers went up.

Whatever *is* known becomes so because of public outcry. Some 160 air-quality monitors are finally set up by DOE, EPA, and NMED teams. Some are "rad swipes" put in place for only brief moments. Others are for continued sampling. Most are geared to check for radionuclides, a few to test for

east, in the direction of Española, Chimayó, and Truchas, but these places were not tested. After the fire, DOE-contracted Bechtel Nevada did one lonely rad swipe in Española, and the bulk of the others to the south, toward Santa Fe, where the wind rarely blows. Another arena for controversy concerns the nature of measured radionuclides. Are they normal forest fire by-products like radon daughters which emit alpha and beta, as the lab insists? Or are they gamma radionuclides, the human-made kind that would be emitted from the lab? LANL and the DOE skirt such questions.

Meanwhile, by happenstance, a cadre of Russian peace activists and scientists has been visiting New Mexico. Sergei Pashchenko of the International Depleted Uranium Study Team has been pronouncing that radiation levels are thirty times above normal. Again, the question is where and when? Whatever the answer, he's had an impact. I run into a couple of Chimayos at Sam's Club in Santa Fe who, freaked to the gills after meeting Pashchenko, bolt from their rental. They beg me to leave, too. I'm

scared, but I have to chuckle when I ask them where they moved and they answer "Pecos." Pecos lies east, just over the mountain from Chimayó. As we know from the travel patterns of radioiodine after the Nevada above-ground tests of the 1950s, airborne contaminants do not necessarily land near their source. They can glide on the wind for miles and drop down in, say, Pecos.

Mello gives an ironic chuckle over his egg salad sandwich. He knows someone who, aiming in the 1980s to flee the ravages of war, moved to the Falkland Islands. He looks me in the eye with his Zen grip. "What place is safe anymore?" he presses, and I get the feeling we are holding on with no more than this breath.

**Wednesday, May 24:** The fire is almost contained. It has burned a total of forty-eight thousand acres of park service, national forest, LANL, city of Los Alamos, and Santa Clara Pueblo lands. At its peak, over fourteen hundred firefighters fought the blaze. Now there are six hundred. The immediate damage could exceed one billion dollars.

Dr. 666 and I attend the second meeting at Cloud Cliff Bakery. This time officials from LANL and NMED join antinuclear activists, environmental illness doctors, and pueblo leaders on the panel. The by-now predictable clash of realities is played out like a drama with no final curtain. The lab people adamantly claim normalcy as regards emissions; the antinuclear folks parade the unknowns and official evasions. Finally, a man from India jumps up and bellows, "HOW MANY ATOMS DOES IT TAKE TO KILL A PERSON?!" Everyone freezes. He hammers his question again and again.



The calmest speaker is Vickie Downie of Tesuque Pueblo. She reminds us that, similar to Hindu prophecies, Native American predictions have long foretold a time of volcanoes, earthquakes, droughts, floods, and fires if humankind does not respect the Earth. We are living in these times, she says. The essential point is not to try to control them. It is *how* we live them. Not enough people are thanking Creation for the water, trees, animals, and land, she says, and she invites us to express gratitude in our every thought and act.

At the dawn of the Nuclear Age, when Los Alamos scientists blasted the first atomic bomb across the New Mexico desert, J. Robert Oppenheimer quoted the Hindu scripture, the *Bhagavad-Gita*: "Now I am become Death, the destroyer of worlds." To some people, the Cerro Grande fire

represents vengeance of the original death, Hiroshima's blackened skeleton returned to its source. To some, the fire is the revenge of the Anasazi who lived at Bandelier before the white people intruded with their laboratories and bombs. To others, it is the work of the Hindu deity Kali at the start of the Age of Kali Yuga.

Outside the meeting, 666 and I linger among the last of the olive blossoms. To us all, the Cerro Grande fire has been a terrible confrontation with the current disarray of human existence—and a call to remember, through the layers of fear and loathing, who we are. The good doctor vows to return to his former identity, that he is ready to rename himself Robert Shaw. He walks me to my Honda and, neither aflame with confidence nor beaten into ash, I make a vow too. I vow to drive home. ☞