Paper: Sun-Sentinel
Title: NEW MEXICO FIRES RAISE FEARS ABOUT NUCLEAR WASTE
Author: MICHAEL JANOFSKY The New York Times
Date: May 20, 2000
Section: NATIONAL
Page: 5A

The fires that consumed almost 50,000 acres of northern New Mexico, including parts of the Los Alamos National Laboratory, have raised new concerns over the buildup of nuclear and hazardous waste stored at the laboratory.

State and federal officials have insisted that the fires, which were 70 percent under control by late Friday, did not get close enough to threaten thousands of containers filled with used gloves, rags, booties and other combustible items contaminated by low-level radioactive waste, such as plutonium. By some estimates, the closest flames remained half a mile away.But scientists and environmentalists said Friday that dry conditions in forests adjacent to the storage site make them ripe for another fire -- and a potentially more dangerous situation because of the increasing quantity of stored waste.

Typically, the laboratory generates 150 cubic meters of waste a year that is stored above ground in 55-gallon steel drums and in smaller wood boxes that sit under a fabric dome. The current level is 4,808 cubic meters -- the equivalent of 14,000 drums.

"The problem is just sitting there, just waiting for another incident to happen," said a Los Alamos scientist who spoke on the condition of anonymity. "There are a lot of people who share that concern."

Greg Mello, director of the **Los Alamos Study Group**, a nuclear watchdog organization, said: "It's a dangerous situation. If they could get that stuff out of there, everyone would be better served."

Officials from the Energy Department have disputed the contention that anything at the storage site is vulnerable to fire.

They cite an environmental-impact study of the laboratory conducted four years ago in which officials created a theoretical worst-case fire and found that the waste would survive unaffected.

But even if conditions became so grave that the drums overheated and exploded, sending toxic plumes skyward, the study concluded that no one within a 50-mile radius would suffer ill effects.

Many scientists, however, contend that the department's worst-case test was not worst-case at all. While the department model assumed a breach of 62 drums, Edwin Lyman, scientific director of the Nuclear Control Institute, a nonprofit research organization in Washington, said an intense fire would more likely breach "closer to hundreds" of drums, causing a much greater potential for illness than the study provides.

Author: MICHAEL JANOFSKY The New York Times
Section: NATIONAL
Page: 5A

Paper: Contra Costa Times (Walnut Creek, CA)
Title: FIRES FUEL NUCLEAR-WASTE CONCERNS - SCIENTISTS SAY A NEW BLAZE IN DRY FORESTS NEARBY COULD PRESENT A RISKIER SITUATION AS THE AMOUNT OF WASTE STORED AT LOS ALAMOS INCREASES
Author: Michael Janofsky
Date: May 20, 2000
Section: news
Page: A14

SANTA FE, N.M. -- The fires that consumed nearly 50,000 acres of northern New Mexico, including parts of the Los Alamos National Laboratory, have raised new concerns over the buildup of nuclear and hazardous waste stored at the laboratory.

State and federal officials have insisted that the fires, which were 70 percent under control by late Friday, did not get close enough to threaten thousands of containers filled with used gloves, rags, booties and other combustible items contaminated by low-level radioactive waste, like plutonium. By some estimates, the nearest flames remained half a mile away.

But scientists and environmentalists said Friday that dry conditions in forests adjacent to the storage site make them ripe for another fire and a potentially more dangerous situation because of the increasing quantity of stored waste.

Typically, the laboratory generates 150 cubic meters of waste a year that is stored above ground in 55-gallon steel drums and in smaller wood boxes that sit under a fabric dome.

The current level is 4,808 cubic meters the equivalent of 14,000 drums.

"The problem is just sitting there, just waiting for another incident to happen," said a Los Alamos scientist familiar with the storage area who spoke on the condition of anonymity. "And there are a lot of people at the lab who share that concern."

Greg Mello, director of the **Los Alamos Study Group**, a nuclear watchdog organization, said: "It's a dangerous situation. If they could get that stuff out of there, everyone would be better served."

Officials from the Energy Department and the laboratory have disputed the contention that anything at the storage site, a mesa surrounded by canyons known as Technical Area 54, is vulnerable to fire.

They cite an environmental study of the laboratory conducted four years ago in which officials created a theoretical worst-case fire and found that the waste would survive unaffected.

But even if conditions became so grave that the drums overheated and exploded, sending toxic plumes skyward, the study concluded that no one living within a 50-mile radius would suffer ill effects.

Many scientists, however, contend that the department's worst-case test was not worst-case at all.

While the department model assumed a breach of 62 drums, Edwin Lyman, scientific director of the Nuclear Control Institute, a nonprofit research organization in Washington, said an intense fire would more likely breach "closer to hundreds" of drums, causing a much greater potential for illness than the study provides.

"The department," Lyman said, "has refused to look at the real worst-case scenario."

Efforts are under way to remove the waste at Los Alamos to the Waste Isolation Pilot Plant outside Carlsbad, which opened last year after a decade of delays.

For now, the rate of removal is but a trickle.

With cleanup at the Rocky Flats nuclear-weapons plant outside Denver, which is scheduled to close by 2006, and three other facilities producing nuclear waste for disposal, the competition for removal has grown intense.

For Los Alamos, the pace has been further slowed by lawsuits challenging environmental impact and a dispute between the state government, which requires that the contents of every container be itemized, and the Energy Department, which does not agree that detailed inventories are necessary.

Energy Department officials said Friday that Los Alamos shipped

714 drums of waste last year, with 252 scheduled to go this year, 1,176 next year, 2,940 in 2002 and increasing numbers in the following years.

While that leaves the majority of the drums on site for the foreseeable future, officials from the lab and the department insisted that the containers were well protected, largely because the recommendations of the environmental study were followed.

To add layers of protection, wood was removed from the perimeter of the laboratory, the tree line was moved back and dirt pathways were built as a buffer against fires from the canyons below.

Still, critics are not convinced that enough safeguards are in place, especially with the unpredictable updrafts from the canyons, which the current fires demonstrated, and the ever-present possibility of sparks during an intense fire.

Rep. Mark Udall, a Democrat whose district includes the laboratory, said Friday that a recent tour of the laboratory convinced him that the fire "was too close for comfort," and that rebuilding efforts some older buildings were destroyed should emphasize greater protection against fire and other disasters.

Udall also said the waste removal from Los Alamos was part of a larger national problem for which Congress has traditionally authorized only limited spending.

"On a national scale," he said, "this is not regarded as a high risk. But we need to get to the job of cleaning up all over the country."

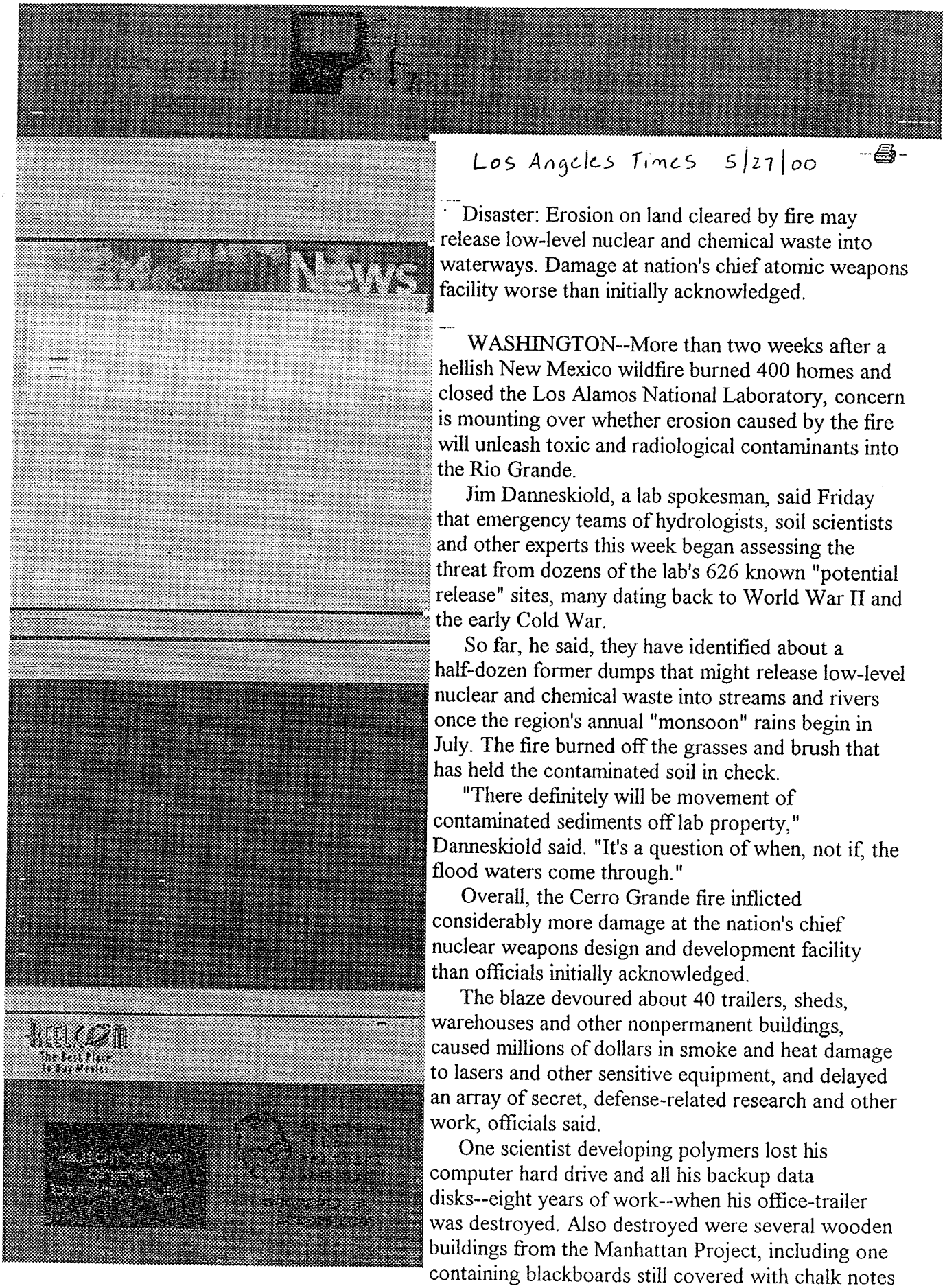
The Los Alamos scientist who did not want to be identified added one further regret.

He said he and his colleagues were eager to return to work next week when the laboratory reopens. But they were anxious, as well, he said.

"The lab is tucked away in what was some of the most beautiful scenery you've ever seen," he said.

"Since the fire, it looks terrible, and you can't just go out there with a bucket of paint and fix it. That was slow-growth forest that burned. It will take a long time to come back to what it was."

Author: Michael Janofsky
Section: news Page: A14



Los Angeles Times 5/27/00

Disaster: Erosion on land cleared by fire may release low-level nuclear and chemical waste into waterways. Damage at nation's chief atomic weapons facility worse than initially acknowledged.

WASHINGTON--More than two weeks after a hellish New Mexico wildfire burned 400 homes and closed the Los Alamos National Laboratory, concern is mounting over whether erosion caused by the fire will unleash toxic and radiological contaminants into the Rio Grande.

Jim Danneskiold, a lab spokesman, said Friday that emergency teams of hydrologists, soil scientists and other experts this week began assessing the threat from dozens of the lab's 626 known "potential release" sites, many dating back to World War II and the early Cold War.

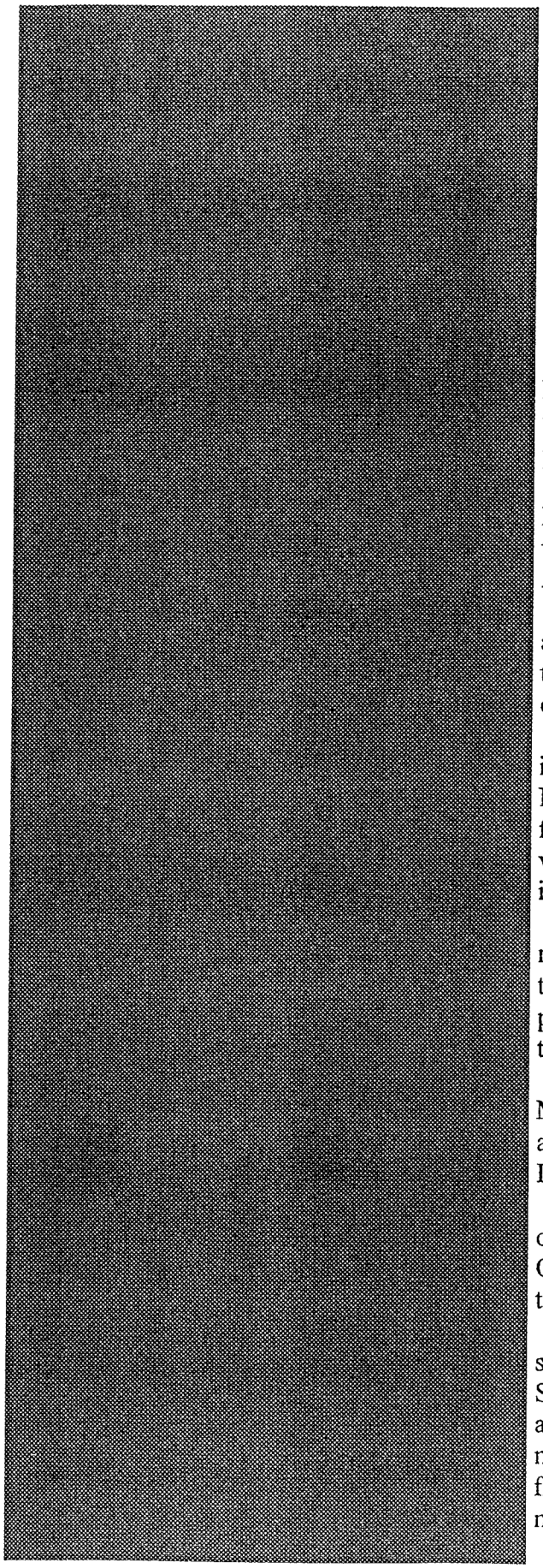
So far, he said, they have identified about a half-dozen former dumps that might release low-level nuclear and chemical waste into streams and rivers once the region's annual "monsoon" rains begin in July. The fire burned off the grasses and brush that has held the contaminated soil in check.

"There definitely will be movement of contaminated sediments off lab property," Danneskiold said. "It's a question of when, not if, the flood waters come through."

Overall, the Cerro Grande fire inflicted considerably more damage at the nation's chief nuclear weapons design and development facility than officials initially acknowledged.

The blaze devoured about 40 trailers, sheds, warehouses and other nonpermanent buildings, caused millions of dollars in smoke and heat damage to lasers and other sensitive equipment, and delayed an array of secret, defense-related research and other work, officials said.

One scientist developing polymers lost his computer hard drive and all his backup data disks--eight years of work--when his office-trailer was destroyed. Also destroyed were several wooden buildings from the Manhattan Project, including one containing blackboards still covered with chalk notes



containing blackboards still covered with chalk notes used to construct the first atom bomb.

Energy Department and lab officials said that the fire did not jeopardize the lab's main mission: guaranteeing the safety and reliability of the nation's nuclear stockpile. Federal and state agencies have not detected any release of radiation from the lab, although local background radiation readings have increased because of the fire.

Thousands of physicists, engineers and other lab workers began returning to the battered facility this week for the first time since the lab closed on May 8. But several research and testing sites, where the fire was most intense, will remain closed for an indefinite period.

In addition, about 270 lab workers who lost their homes or other property have been given liberal leave to arrange their personal affairs. In all, 400 Los Alamos families were made homeless by the blaze.

In Washington, President Clinton said that his administration is "committed to ensuring that all those who have been affected by the fire . . . are fully compensated for their losses."

Clinton said in a statement that the White House is working with the congressional delegation from New Mexico to write legislation to provide for federal compensation. "We are committed to working with the Congress to ensure that this matter is addressed as promptly as possible," he added.

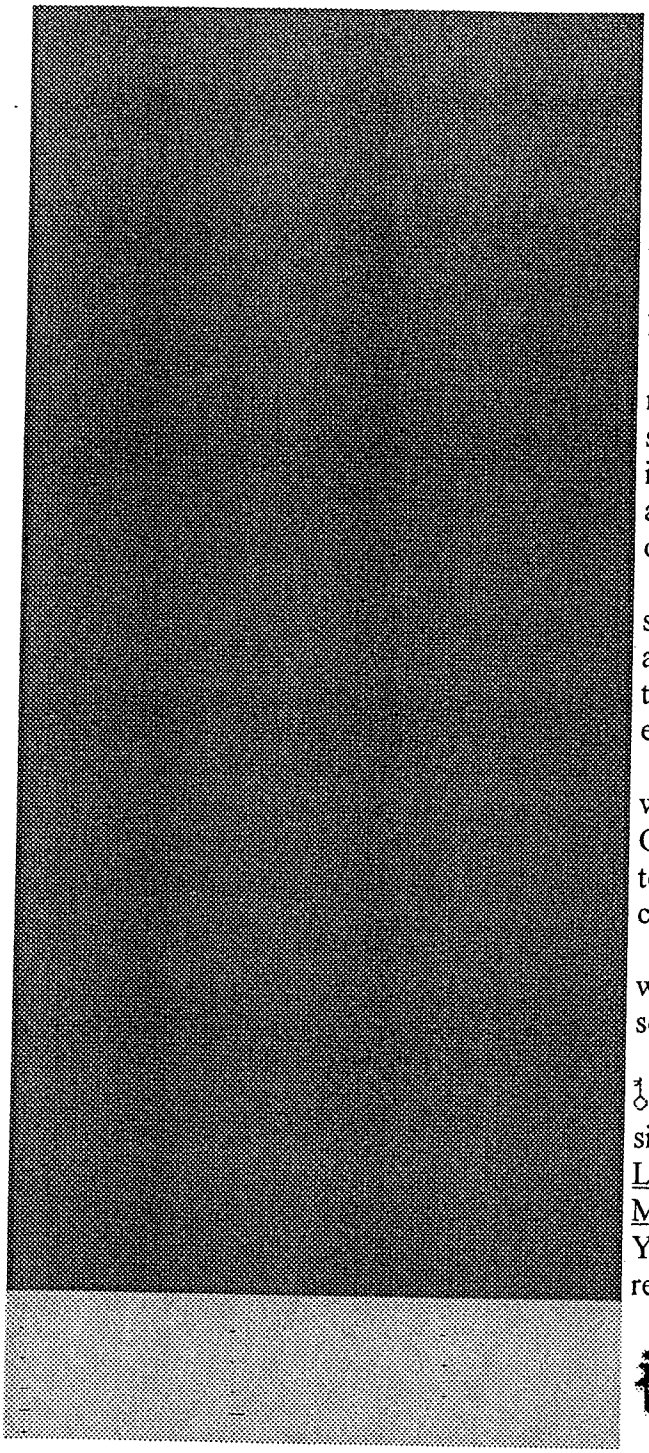
Interior Secretary Bruce Babbitt separately released a report from an independent review board that sharply criticized National Park Service personnel for igniting the blaze that accidentally led to disaster.

Park Service crews at Bandelier National Monument set a "prescribed burn" on May 4 in an attempt to clear underbrush and prevent a wider fire. Instead, the blaze roared out of control.

Babbitt said that he would extend a moratorium on prescribed burns by the Park Service indefinitely. Other federal agencies may resume the fire-control tactic when the monthlong ban expires on June 12.

The New Mexico fire has devoured 47,650 acres so far, including parts of the Los Alamos lab, the Santa Fe National Forest, the San Ildefonso Pueblo and Santa Clara Pueblo. Although the inferno is now mostly under control, high winds continue to bedevil firefighters and the blaze flared up again Thursday night near the lab.

The fire's long-term danger is only now coming



into focus. An interagency task force called the Burned Area Emergency Rehabilitation team this week began assessing the threat from erosion on the now-bare hills and canyons surrounding the town of Los Alamos, which adjoins the lab.

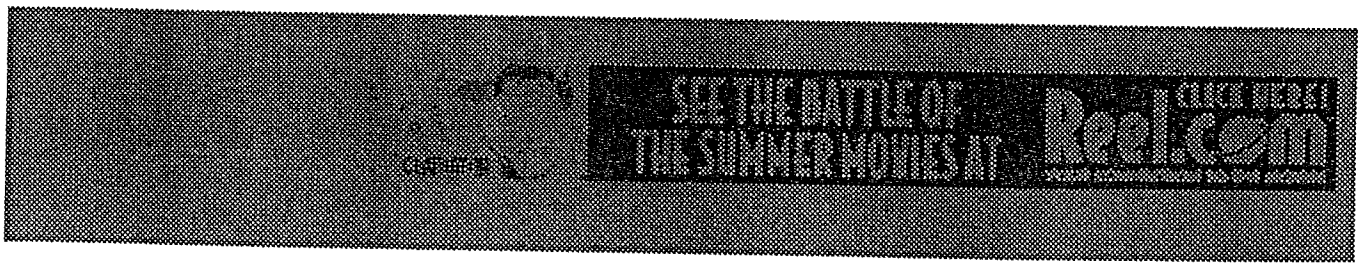
Ken Palmrose, a spokesman for the group, said that computer models project erosion "that could be 100 times normal" this summer from heavy rains and lack of ground cover.

He said that 85 crew members already have begun raking charred topsoil, planting trees and contouring slopes to reduce runoff. He said the challenge was so immense that "we're considering things larger than anything in our manual," including damming canyons or building large sediment pools.

Indeed, three helicopters and a plane are on standby to begin aerial reseeding of severely burned areas with native species of grass. About 18 truckloads of seed--720,000 pounds in all--were expected to arrive Friday.

But Greg Mello, who heads an independent watchdog organization called the Los Alamos Study Group in Santa Fe, said that officials are moving far too slowly to clear up the witches' brew of toxic contaminants in the lab's disused dumps.

"Huge flood flows are expected from the burned watersheds this year," he warned. "Contaminated sediment will move downstream."



Plutonium Amount Detected Is Debated

BY IAN HOFFMAN
Journal Staff Writer

A whiff of plutonium could have floated into White Rock during the peak of the Cerro Grande Fire, as well as some depleted uranium at the Los Alamos County Airport. Or not. They could have been ghosts produced by ultrasensitive lab analysis.

The latest wave of state air-testing data, rushed onto the Internet on Friday before thorough analysis, is fraught with such large uncertainties that it is difficult to say for sure. State scientists say their results show nothing more than typical, extremely tiny releases of lab contaminants.

"It's consistent with historic measurements," said John Parker, head of the New Mexico Environment Department's bureau watching over U.S. Department of Energy facilities. "If what we're seeing is what we've been living with all these years, our assumption is there's no additional risk."

An array of state, federal and Los Alamos National Laboratory scientists agree the bulk of smoke-testing data so far reflects no evidence of radioactive or hazardous releases from the burning of 7,700 acres of lab land. Instead, air-testing results show increases in radioactivity of a nature more closely matching emissions from the burning of a forest growing out of northern New Mexico's uranium-laden soils.

"Clearly there was some additional exposure based on natural materials," Parker said. But "we can't even quantify it. It's so far below any level of measurable health risk."

Environmentalists cited the higher radioactivity levels in demanding independent monitoring and analysis of fire-ravaged land around the Los Alamos lab.

"We're calling for an independent citizens review board to assess the monitoring data and risks and we want a long-term health study of people exposed to the smoke," said Suzanne Westerly, director of Concerned Citizens for Nuclear Safety in Santa Fe.

Sergei Pashchenko of Bernalillo, a consultant to the International Depleted Uranium Study Team, concludes "on the basis of data from LANL, the fires that began on May 8 increased the concentration of alpha radiation in the air up to 30 fold," according to a statement released by the study team Thursday.

The state's latest data features a questionable detection for plutonium in White Rock between May 13 and 15, at a level of 15.1 attacuries, or millionths of a billionth of a curie, a hair above the minimum detection level of 13.9 attacuries that is technologically possible to see. Scientists generally dismiss any finding so close to the minimum detection limit as being within the margin of lab error. They would still debate whether plutonium detected at almost twice the level found actually existed.

Longtime lab watchdog Greg Mello said the two apparent detections are "not significantly above zero."

Inhaling even tiny amounts of plutonium can produce internal radiation to lung tissues and increase the risk of lung cancer. But the tinier the number, the more that risk "becomes quite small compared to all the other ways you can die," said Mello, head of the Los Alamos Study Group, a nuclear-disarmament group in Santa Fe.

"We have apparent spikes but they may not even be there," said Mello of the state's latest air-testing results. "I don't think you can make definitive conclusions one way or another from looking at these levels."

He commended state scientists for putting their data out so quickly for public review.

"I know they're rushing this out prior to full analysis so the world can see the raw numbers whether they mean anything or not," Mello said.

The Associated Press contributed to this report.

Paper: Washington Post
Title: Voluminous Waste
Date: May 27, 2000
Section: OP-ED
Page: A25

The article "Park Service Ignored Risks" [front page, May 13] contained the following statement:

"The so-called 'Area G' covers 63 acres and contains more than 10 million square feet of nuclear waste, according to the **Los Alamos Study Group**. "This is obviously an error because 63 acres is equivalent to only 2.7 million square feet. I suspect that the authors (or the study group) meant 10 million cubic feet. It would make more sense to measure a quantity of stored radioactive material by volume rather than area, after all.

--James R. Frysinger

Section: OP-ED
Page: A25

Paper: New Mexican, The (Santa Fe, NM)
Title: Storms flood canyons on LANL property
Author: KRISTEN DAVENPORT and GEOFF GRAMMER
Date: June 29, 2000
Section: Main
Page: A-1

Lab officials say neither of the canyons struck by monsoon rains is highly contaminatedRain fell Wednesday in Los Alamos, and several canyons on Los Alamos National Laboratory property flooded after heavy storms pounded the southern portion of the nuclear-weapons laboratory.

Declaring an unofficial beginning to New Mexico's summer monsoon season, meteorologists say more rain can be expected in coming weeks on the 48,000 acres burned by the Cerro Grande fire in May.

``It's pretty safe to say this is the start'' of the monsoon season in Northern New Mexico, said Kurt Van Speybrock of the National Weather Service.

Water Canyon and Pajarito Canyon -- both on lab property -- received substantial rains, causing water and sediment to flow toward the Rio Grande. But lab officials say neither of the canyons that flooded are highly contaminated with radioactive materials or other toxic chemicals.

It also wasn't clear whether the floodwaters reached the Rio Grande or whether they soaked into the canyon bottoms before reaching the river. The water flowed several feet higher in the canyon but apparently did not wash over canyon rims except in isolated areas.

Activists and environmentalists have been worried in recent weeks that ash and sediment in the lab's contaminated canyons could wash downstream in heavy rains.

``Water Canyon flooded pretty heavily,'' said Lee McAtee, the lab's director for environmental health and safety.

``There's not much contamination in either canyon,'' McAtee said. The lab did take samples of the runoff water to check for contaminants; however, the results won't be back for three to four weeks, he said.

One of the lab's water-monitoring devices also washed away in the floods.

Canyons that are more heavily contaminated -- such as Los Alamos Canyon -- did not flood, McAtee said. Workers have been moving tons of radioactive sand out of Los Alamos Canyon in case of heavy rains. About half an inch fell above Los Alamos Canyon.

Most of the rain fell between 11 a.m. and noon, causing N.M. 501 to be closed for several hours. Also, the entire county of Los Alamos and the lab lost power for about three minutes.

``It was likely due to lightning,'' said Don Brown, a spokesman for Public Service Company of New Mexico.

Wednesday's rain also caused lab officials to worry about Technical Area 18, a nuclear-weapons criticality area where scientists perform experiments with radioactive materials. Materials stored in the TA-18 buildings -- which sit just feet above the Pajarito Canyon bottom -- will be moved to another area, McAtee said.

Liquid radioactive uranium nitrate in polyethelyne bottles could be at risk if the buildings were breached by floodwaters, he said. Also, the lab will bring in steel sheets, which will be buried 10 feet deep, to shore up the walls of the nuclear facility.

Other solid radioactive material will remain at the site in steel containers.

Some activists aren't sure LANL even knows what is in the canyons and therefore isn't able to say what might have washed into the river.

``I can't agree that Water Canyon is not contaminated," said Greg Mello, of the **Los Alamos Study Group**, a lab watchdog group. ``To my knowledge, the lab has never given the public or the state any inventory of the contaminants in the canyon."

Mello said Canon de Valle, which is known to contain high explosives and some radioactive material, flows into Water Canyon. Several nuclear-waste dumps sit on the edge of Canon de Valle.

But McAtee said the lab remains confident there is no threat to public health from flooding and said LANL is moving as fast as it can to move contaminated dirt; to mulch burned areas; and to take other precautions against erosion.

As of Tuesday, only 14 of the lab's 91 contaminated sites affected by the fire had been taken care of. Officials expect to have all sites taken care of by mid-July.

``Some of these things take time," McAtee said. ``You don't just go out and move nuclear materials around. You have to make sure it doesn't create (more problems)."

And they are moving the contaminated dirt just in time. Meteorologists from the National Weather Service in Albuquerque say the rainy season is here.

Van Speybrock said although most people associate the monsoon season as a time when the rains hit, a monsoon is actually defined as a climatalogical change of the wind, which he said has been occurring in the Northern New Mexico. The moisture is only a byproduct of that wind change.

The moisture accumulates because of the slowing winds this time of year, he said.

In the town of Los Alamos, the water did wash away some ash and debris accumulated from the fires, said Capt. Wayne Brownley of the Los Alamos Police Department.

``It was black water coming off that mountain," said Brownley, adding that the flow of water peaked around 2 p.m.

That flow, according to Brownley, was slowed down by bales of straw and other measures put in place by volunteers since the Cerro Grande fire.

Author: KRISTEN DAVENPORT and GEOFF GRAMMER
Section: Main
Page: A-1

Scientists Warn Of Flooding

Charred Canyons Could Propel Water Into Los Alamos

5/30/00

By Lan Hoffman
Journal Staff Writer

Three burned Jemez Mountain canyons stand a 50-50 chance this summer of propelling flash floods carrying the equivalent of the Rio Grande into the broad western edge of Los Alamos and its nuclear weapons lab.

Scientists' early estimates suggest Los Alamos' main north-south road would be hit by a third of the Rio Grande's flow within minutes, leading county officials to consider cutting new escape tunnels underneath to release the flood.

A more violent, once-in-a-lifetime storm — dumping twice as much rain or just over two inches of rain in an hour — could blast into the town and Los Alamos National Laboratory with four times the water, or more than 100 times the canyon flows the town has experienced.

It is this more massive storm, seen perhaps once every century, that will drive much of a federal campaign to shore up mountainsides burned by the Cerro Grande Fire.

The work could cut the flood peaks by a third, more with unusual "treatments" like emptying and dredging Los Alamos Reservoir to catch the expected mass of water, mud and logs.

See **SCIENTISTS** *on* **PAGE 5**

Scientists Warn Of Massive Flooding

from **PAGE 1**

"It could be 99 years from now or it could be two weeks from now," said U.S. Forest Service hydrologist Greg Kuyumjian, a member of the Burned Area Emergency Rehabilitation team trying to stave off floods and erosion after the fire.

He and colleagues are warning people to stay clear of the 34 canyons crossed by the fire — especially Rendija, Pueblo and Pajarito canyons — if they think there might be rain.

"If I saw clouds developing, I would get out of the canyons," Kuyumjian said. "The risk is you might not see the clouds."

Los Alamos lab executives are weighing a more elusive risk of losing radioactive contaminants into the Rio Grande. They even are mulling a plan to dig up nearly 4,000 dumptruck-loads of polluted canyon sediments.

Disposal price tag: up to $25 million for burying 120,000 barrels of low-level nuclear dirt.

Much of the waste comes from Los Alamos Canyon, which early predictions suggest may not produce enough flow to reach the Rio Grande. But lab cleanup scientists who for years have said LANL's canyons don't merit excavation now are reconsidering the risk.

The finest, most contaminant-laden sediments might course through Cochiti Dam toward 70,000 acres of irrigated farmland and a quarter of New Mexico's certified organic farmers."We're going to be talking with the appropriate authorities" about the potential risks, said Subhas Shah, chief engineer for the Middle Rio Grande Conservancy District, the region's largest river-water user.

Cochiti's operators at the U.S. Army Corps of Engineers also are talking with Los Alamos National Laboratory and other agencies about ways to bottle up the potentially contaminated runoff.

"We are going to be looking at some different operations that may affect things," said Dick Kreiner of the Corps' Albuquerque district reservoir-control branch. "If there are contaminants there, I don't think you want it getting through the dam."

Will this happen? Preliminary flow estimates argue for the scenario in parts of Los Alamos, against it elsewhere. A lot depends on the violence of summer thunderstorms, the effectiveness of federal fire rehab work and the dilution of tons of uncontaminated mud and water, among other factors.

For now, Los Alamos lab executives say the lab will adhere to its stated goal of "zero" contaminant releases at the lab boundary.

Two independent teams of scientists are running computer models of Los Alamos' worst-burned watersheds and, although the predicted flows in some canyons are lower than first feared, they remain high enough to carry contaminants off lab land in others. For lab cleanup workers, the flows could translate into an unprecedented campaign of excavating wastes and building defensive bulwarks to slow the floodwaters.

"It's not a matter of if (the waste) moves," said Julie Canepa. "Given some of the (preliminary flow) numbers, I've been told you're moving material."

The wastes — primarily plutonium, americium, cesium and strontium — are byproducts of nuclear-weapons research and manufacturing from the Manhattan Project through the earliest decades of the Cold War.

So far, Canepa said, "we're going to continue on that front of trying to make sure nothing leaves the site. It's an admirable goal. It's a matter of what humans can do. ... If that's the goal this laboratory wants, we're going to go for it."

Digging up 70 percent of the lab-tainted sediments in Pueblo and Los Alamos canyons — an estimated 30,000 cubic meters — packaging it in barrels and burying it could cost the federal government $25 million, she estimated.

"I can't do 100 percent, but I can do 70 percent," Canepa said. "I think we'd be able to do it quickly," before the start of the rainy season, expected in early July.

Federal land agencies asked the federal rehab team to reinforce the burned watersheds to withstand a 100-year storm.

Leaders of the team had wondered whether they had enough mountainside to install all the flood- and erosion-control structures needed but now are more confident.

"The more the numbers (for flow estimates) come in, the more we're heartened," said team co-leader Wayne Patton. "We're really starting to think this is possible."

5/30/2000

OPINION

Contradictory actions on nuclear weapons

By John Burroughs and Jacqueline Cabasso

George W. Bush's new proposals for unilateral cuts in America's nuclear arsenal while pursuing missile defense and space-based weapons are one illustration among others that the United States suffers from a kind of schizophrenia regarding the future of its nuclear arms.

One side of the American policy brain seems wired for the idea that huge stocks of nuclear weapons are, as Bush said, "expensive relics of dead conflicts," and we should use this moment in history to pursue arms reductions and defuse the nuclear threat. The other is wired for continued reliance on fewer but fancier nuclear weapons, and missile shields that presuppose nuclear weapons will exist indefinitely.

Bush's rhetoric of rejecting the "Cold-War mentality" is indicative of welcome re-evaluation of nuclear policy thinking. But the contradictory idea of proceeding with missile defense while at the same time convincing the Russians to reduce the numbers and alert status of nuclear warheads is out of touch with reality.

The Clinton administration suffers from the same sort of split personality. In international negotiations such as the just concluded review of the Nuclear Non-Proliferation Treaty at the United Nations, the United States talks disarmament and opposes the spread of nuclear weapons, while in Washington policies are still openly based on fielding threats of nuclear annihilation.

On May 20, the NPT review ended with the United States and other nuclear weapons states agreeing to an historic consensus statement affirming their "unequivocal undertaking . . . to accomplish the total elimination of their nuclear arsenals." For the first time in the NPT's 30-year history they dropped weasel words such as "ultimate goal" regarding their treaty obligation to pursue nuclear disarmament.

Back in Washington, by contrast, authoritative Defense Department annual reports plan for maintenance of large nuclear forces and the policy of nuclear deterrence for the "foreseeable future." A 1997 presidential directive affirms that the United States will continue to rely on nuclear arms as a cornerstone of its national security for the "indefinite future." A March 2000 Energy Department document obtained by the Los Alamos Study Group identifies the requirements for keeping nuclear weapons viable "forever."

At the NPT conference the United States also committed itself to "concrete agreed measures to reduce the operational status of nuclear weapons." This means we promise to work with Russia to take nuclear forces off hair-trigger alert, so that missiles are no longer ready to fly within minutes of an order to do so. Candidate Bush also says "the United States should remove as many weapons as possible "from high-alert, hair-trigger status" because that status "may create unacceptable risks of accidental or unauthorized launch."

But diplomatic "talking points" recently obtained by *The Bulletin of Atomic Scientists* revealed that U.S. negotiators actually advised Russia that keeping its nuclear forces on alert would be a good idea. Under "any possible future arms control agreement," the talking points say, Russia (like the United States) could maintain on "constant" alert a "large, diversified, viable arsenal," sufficient to mount an "annihilating counterattack" in response to a U.S. first strike. This astonishing suggestion was supposed to reassure Russia that it could overwhelm the limited U.S. national missile defense system the Clinton administration seems bent on deploying.

And Bush calls for an even more elaborate missile defense system, possibly including space-based weapons, even though he must know what the U.S. talking points make clear: that it would force Russia to refuse de-alerting and reduction in nuclear arsenals.

At the NPT conference the United States also committed to "a diminishing role for nuclear weapons in security policies to minimize the risk that these weapons ever be used and to facilitate the process of their total elimination. Yet Defense Secretary William Cohen, in his February 2000 Report to the President and Congress, described an expanded role for nuclear weapons, "to deter any potential adversary from using or threatening to use nuclear, chemical, or biological (NBC) weapons against the United States or its allies, and as a hedge against defeat of U.S. conventional forces in defense of vital interests."

At the NPT conference the United States additionally agreed that a no-backtracking "principle of irreversibility" applies to nuclear disarmament. Yet U.S. laboratories are being funded for nuclear weapons maintenance, research, design and development at inflation-adjusted levels higher than the average Cold War year. Among many new programs, the labs are planning by 2020 to be able to produce annually, at a new facility, 450 plutonium triggers for nuclear warheads — a number comparable to or exceeding the size of the individual arsenals of China, France, the United Kingdom and Israel.

The U.S. government needs to start speaking with one voice, its disarmament voice, and to act accordingly. The imminent Clinton-Putin summit in Moscow in June is the place to start. the United States should stop pursuing national missile defense schemes that block arms reductions and threaten to spur new arms races, seek and accept sweeping reductions in both strategic (long-range) and tactical (short-range) weapons, and together with Russia take all weapons off hair-trigger alert so that Armageddon is no longer the push of a button away.

Finally, the United States should initiate multilateral negotiations on the framework for a nuclear-weapon-free world. These would be good first steps toward nuclear sanity and real global security.

Burroughs is the executive director of the New York-based Lawyers' Committee on Nuclear Policy. **Cabasso** is the executive director of the Western States Legal Foundation in Oakland.

Geoffrey Moss

NUKEWATCH
PATHFINDER

A publication of the Progressive Foundation – Summer, 2000

Los Alamos, City of Fire

By Bonnie Urfer

LOS ALAMOS, NM—Over 30 percent of the land at Los Alamos National Laboratory (LANL), including some buildings, burned in "Cerro Grande," the largest fire in New Mexico. Greg Mello of the Los Alamos Study Group said in an interview with Pacifica Radio's Amy Goodman that the U.S. Department of Energy (DOE) immediately classified all information regarding airborne particulate from the fires in and around LANL.

Media reports echoed DOE vagary on the subject of surface contamination while saying again and again that nothing was released from the concrete and steel storage bunkers.

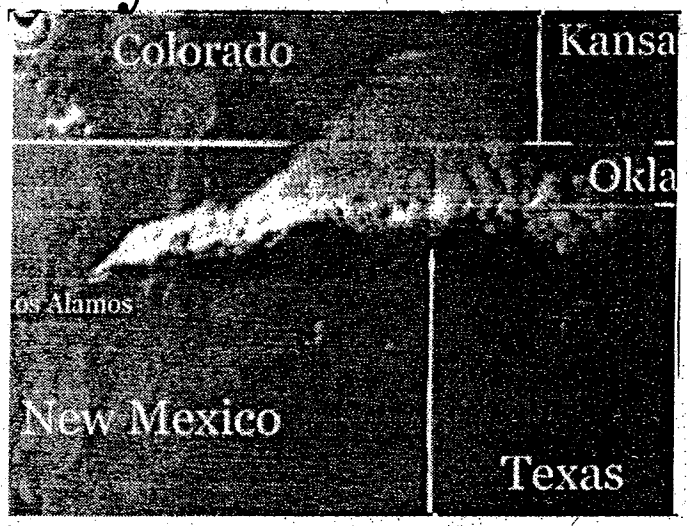
Los Alamos is heavily contaminated with radioactive waste. The fire swept areas contaminated with PCBs, dioxins and radioactive isotopes, and the DOE continues to deny that the poisons became airborne. Since the 1940's, radioactive waste and other toxins have been buried and dumped throughout the 43-square-mile compound leaving an estimated 2,000 "potential release sites."

LANL has disposed of at least 17,500,000 cubic ft. of hazardous and radioactive wastes on-site at 24 dumps. Sixteen are thought to pose "moderate" to "high" risks of long-term groundwater contamination. "The fire torched three canyons on the lip of LANL where liberal supplies of radioactive waste were dumped during the Manhattan Project," said Lee McAtee, deputy division director of environmental safety and health at the lab.

Lab officials said May 17 that its weapons-engineering tritium facility at Technical Area 16 "was swept by fire, but the masonry building was left intact." Ground water contamination has already occurred in Technical Area 16. Acid Canyon, near the town of Los Alamos, burned. It was the site of radioactive waste dumping during the 1940's and 50's although the lab says it has been "environmentally restored." Some 610 kilograms of plutonium-239 is *missing* at LANL. PU-239 has a half-life of 24,100 years.

The May 12 *New York Times* reported, "The flames were spewing burning chunks of wood thousands of feet in the air, where they were being blown as far as a mile and starting new fires." The gigantic plume, 17,000 to 20,000 feet high, stretched into Oklahoma, Colorado, Kansas and Texas. Local groups have called for independent analysis of air quality data by international scientists.

Lab Director John Browne is concerned about soil erosion of contaminated areas. If radioactive soil erodes, the Rio Grande becomes the dumping ground. Some heavily burned land from past fires lost 100 tons of soil per acre or more. Browne is trying to assure residents that LANL will do all it can to prevent defiled dirt from leaving government property.



Liar, Liar, Plant's on Fire—This photo of the smoke plume rising from the New Mexico wildfire was taken May 11 by NASA's Terra Satellite. The fire burned more than 30% of the land at the Los Alamos National Lab. Residents reported radiation levels 2 to 10 times higher than normal. The DOE says increased levels are normal when vegetation burns, but concerned citizens want independent analysis and monitoring.

Russian nuclear and atmospheric scientist Sergei Pashchenko, a consultant to a non-governmental group working to ban depleted uranium weapons, said he analyzed the limited data available on the LANL's internet site and determined that elevated radiation counts could not be dismissed as naturally occurring effects of the fires.

Ten percent of LANL's 12,000 employees were expected back at work by May 22.

1,290 firefighters were exposed to unknown levels of contaminants. LANL representatives claimed they collected the clothes of firefighters for proper disposal. Firefighters, who wore no radiation badges, say they still have the clothes they wore. State and federal health authorities are making plans for voluntary urine tests for persistent toxic metals possibly absorbed by firefighters and residents exposed to fumes.

The prize for the most ironic mixed metaphor goes to a local grocer who returned to his Los Alamos market to find $20,000 worth of frozen food—spoiled. "We got rid of the chicken first," he said. "That's like a time bomb sitting around."

Underground fire still burns at lab

6/8/00

By KRISTEN DAVENPORT
The New Mexican

Nearly one month after the 47,000-acre Cerro Grande fire burned over Los Alamos National Laboratory property, officials say one of the lab's waste dumps is still ablaze underground.

The waste dump, known as Material Disposal Area R, was used in the early days of the lab during and after World War II. Although no definite information exists on what the dump contains, state environment officials and activists say it probably has high explosives, depleted uranium, barium, beryllium and heavy metals dating back to the 1940s and 1950s.

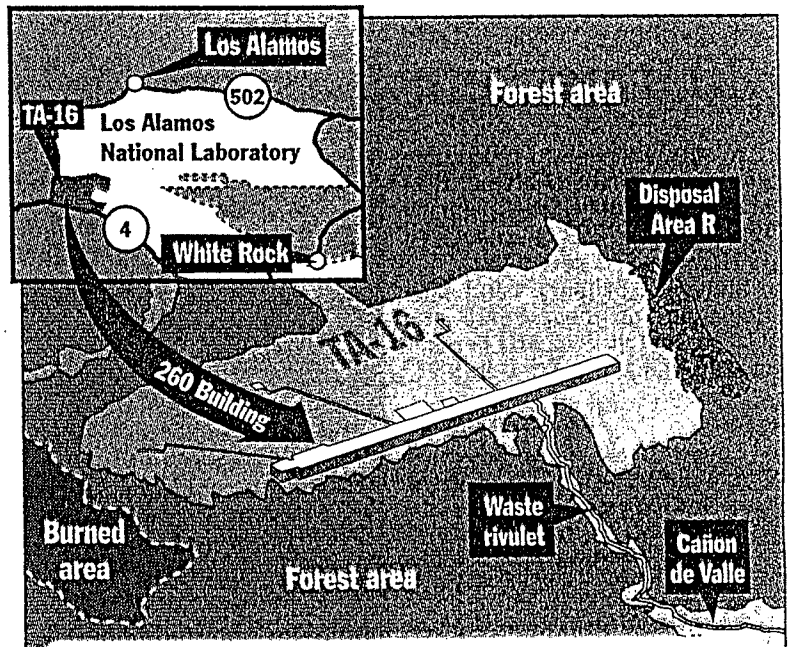
A recent study of material-disposal dumps on lab property says the R-dump — one of 24 similar contaminated-waste sites at the lab — contains three pits of unknown depth. The site is on the state environment department's list of dumps with a high probability of contaminants moving off-site — such as through erosion — and a moderate to high potential of releasing contamination to the Los Alamos groundwater.

Lee McAtee, the lab's deputy director for environmental and health safety, said it's not clear how deep the fire is burning in the pit.

"It's just kind of puffing periodically," McAtee said.

He said there is no apparent

Please see **LAB**, Page A-4



Dump still ablaze at LANL

An underground dump at the Technical Area 16 site on lab property continues to burn. The dump, indicated by the red area at right, is Disposal Area R. The waste rivulet, leading from the 260 Building, is thought to have soil that contains up to 30 percent high explosives.

Robert Martinez/The New Mexican

The graphic in this article is based upon a photo provided by the Los Alamos Study Group.

LAB

Continued from Page A-1

public-health threat from the lingering fire, although it does threaten workers in the area.

Lab and state environment officials sent a remote-controlled robot Wednesday to begin excavating the waste dump and dig out some of the burning material so the fire can be extinguished. They already had tried to put out the underground fire by piling tons of dirt on the dump, but that didn't work.

"We think there is some construction debris (in the dump), and we think that is what's burning," said Greg Lewis, director for the state environment department's groundwater bureau.

Lewis said officials think wooden items — such as old two-by-fours — are burning, not contaminated materials. But he said someone still has to put it out.

"If you've got this pile of thick rubbish, you can't smother it" with dirt, he said. "So they're trying to expose the burning parts."

Because of explosives and possible radioactivity, workers have to stay a safe distance from the dump, Lewis said, so the work is being done remotely by robot. And lab and state environment workers aren't sure whether they can douse the dump area with water for fear that contaminants could leach into the groundwater or be sent down a streambed.

The dump sits on the edge of Cañon de Valle in Technical Area 16, which is in the far-western area of the lab bordering Santa Fe National Forest land and West Jemez Road. The area was badly damaged by the fire. Most of the work in TA-16 is done on high explosives and involves uranium, a radioactive material.

"There is some potential that (depleted uranium) is buried there, yes," said James Bearzi, director of the state environment department's hazardous and radioactive materials bureau.

High explosives contaminating parts of TA-16 and the burning dump are considered by the Environmental Protection Agency to be a possible carcinogen.

Bearzi said the state is confident the lab is taking care of the dump problem and agreed it poses no threat to public health.

"It's a secured site (closed to the public) and right now the biggest threat is to workers," Bearzi said.

The Department of Energy, which runs the lab, has air monitors running near the burning dump to see whether radioactivity or other toxic chemicals are being released from the underground fire.

State officials and DOE teams are monitoring the air, and the filters on the air monitors will be split between DOE and state officials. Results are expected in about two weeks after being analyzed by an Albuquerque laboratory.

However, McAtee said, an initial evaluation of numbers indicated nothing toxic was burning.

"As far as we know, there is no radioactivity coming off it," McAtee said.

The waste dump is at the same site as a high-explosives facility known as the 260 Building, where for nearly half a century scientists dumped untreated wastewater tainted with high explosives into the nearby canyon.

Lewis said the rivulet that leads from 260 Building past the waste dump into the canyon reportedly contains earth that is as much as 30 percent explosives instead of dirt.

But no one can tell whether the area exploded in the fire. It is also unknown whether heat alone would be enough to set off a detonation.

"We've seen no evidence of explosions," Bearzi said, although he acknowledged the possibility.

The state environment department, which has some oversight over cleanup of the nuclear-weapons facility, also has about 10 people at LANL to look things over and work with the lab's environmental departments tc clean up after the fire.

The lab also must deal with the possibility of heavy rains causing a flood in contaminated canyons because hillsides are scorched and the fire left no vegetation to hold down soil.

Bearzi said the lab has promised to mitigate that problem and prevent runoff from lab property.

"We want (the lab) to do the right thing," Bearzi said. "So far, the indications are that they will."

High explosives contaminating parts of TA-16 and the burning dump are considered by the Environmental Protection Agency to be a possible carcinogen. However, medical evidence has shown only that certain kinds of high explosives can cause seizures in humans when ingested or inhaled, but effects of long-term and low-level exposure is not known, according to the Agency for Toxic Substances and Disease Registry.

Paper: New Mexican, The (Santa Fe, NM)
Title: Contamination Concerns
Author: KRISTEN DAVENPORT, photos by Craig Fritz
Date: June 12, 2000
Section: Main
Page: A-1

LANL says potential runoff poses no health risk, but lack of information is causing concern from others. How strange and sad that fire on Los Alamos lab property could make New Mexicans, of all people, afraid of rain.

Forecasters this week predicted that the annual desert ``monsoons" -- New Mexico's rainy season, which on average begins the first week of July -- will start early, any day now. The Los Alamos area has already received one substantial rain since the Cerro Grande fire tore through the area.

And what that means for residents downstream from Los Alamos National Laboratory has a lot of people worried -- just about everyone except for lab officials.

About 8,000 acres of lab property burned, or one-fourth to one-third of the lab's total property, and thousands more acres above the laboratory on the hillsides were scorched. After any fire, floods can be expected where there is no longer vegetation to hold the rains.

The concern is that contamination lingering in the dozens of canyons on lab property from more than 50 years of working on nuclear weapons -- radioactive materials and other hazardous chemicals -- could be washed downstream and into the Rio Grande, eventually depositing at Cochiti Reservoir.

Dick Burick, chief of the LANL fire-cleanup operation, said recently that lab scientists believe that even if every bit of contamination washed downstream, there would be no threat to public health.

Just the same, lab officials plan to spend at least $300 million on cleanup from the fire -- reseeding burned areas, felling trees, building rock structures, putting out jute mats and hay bales and otherwise trying to keep dirt and sediment and water from washing away onto pueblo and public land.

It's a matter, lab officials say, of being good environmental stewards and good neighbors -- not a scientific question.

``There really is minimal risk," Burick said at a Los Alamos community meeting about the fire cleanup. ``There could be some radiological release (from erosion), but that is highly unlikely."

Other lab environmental workers are less equivocal.

``The contamination does not pose a health risk under any scenario," said Lee McAtee, director of LANL's environmental health and safety division. ``There is no health risk."

However, he said, ``We understand the public doesn't want it, and we want to be good stewards of the environment.

``Our motivation is to do the right thing."

So, somehow, in a matter of a few days to a few weeks (hoping the rains hold off), lab workers must figure out how to keep sediment from washing off the property. Estimates from erosion experts say that a 2-inch rainfall in an hour -- a rain that comes only once every 100 years in this part of the state -- could cause disastrous flooding.

Inventories of canyon contamination

Meanwhile, environmentalists and anti-nuclear activists say the lab could not possibly know whether severe erosion poses a health threat, because no one is entirely sure how much contamination exists in lab canyons.

In fact, the lab has fully inventoried only one of the canyon systems on its property -- Los Alamos Canyon and its tributaries (Pueblo, Acid and DP Canyons). The result: more than 19 grams of plutonium lie in the Los Alamos canyon system in various places, much of it at the confluence of two streambeds. In some of those areas, the contamination is high enough that federal regulations would consider it a mandatory cleanup site.

But there are other contaminated canyons that have not been similarly inventoried: Pajarito, Water, Canon de Valle, Mortandad, Sandia, and Two-Mile Canyons are the major ones.

Julie Canepa, director of the lab's Environmental Restoration division, admits Los Alamos Canyon is the only one that has been fully inventoried. Instead, the lab has only estimates on how much contamination lies in those other canyons -- because no solid, thorough analysis exists except in scattered areas such as old waste dumps.

Nonetheless, ``we do have a good understanding of what's in the canyons," Canepa said. ``It isn't easy to entirely characterize eight miles of canyon."

Instead, the lab uses a state-approved method for analyzing areas that have the highest concentrations of contaminants -- largely the confluences of canyons -- and extrapolating to give an estimate of what contamination exists.

But that, anti-nuclear activists say, leaves things far too uncertain for lab and Department of Energy officials to declare that no public health risk exists from lab runoff.

``I'm not convinced we're safe or not safe (from runoff)," said Greg Mello, director of the **Los Alamos Study Group**, a lab-watchdog organization. ``The lab keeps saying there's no health risk, but there's no real analysis, and they don't really know what's in those canyons."

Contaminated areas that burned

There are an estimated 2,000 contaminated areas on laboratory property, in government lingo known as ``potential release sites."

Of these, 626 were in the general area that was burned -- although not all were touched by fire. The estimate from LANL as of Friday indicated that about 286 of those contaminated sites were actually touched by flame during the fire.

But what precisely is at risk of erosion is uncertain. For example, Los Alamos Canyon, with its fairly high levels of contamination, did not burn at all. But the headwaters of the Los Alamos

Canyon were severely burned -- and therefore the canyon is at risk of eroding despite its vegetation if waters from upstream sweep through too quickly.

Other areas are risks because they were burned, exposing contaminants in the ground.

It is almost certain, for instance, that the fire burned over areas contaminated with depleted uranium -- a mildly radioactive byproduct of nuclear-reactor fuel found mostly where scientists have done explosives tests.

But LANL environmental-cleanup workers are still evaluating which areas are really in danger of washing away or otherwise releasing contamination, and they aren't sure how many will need work. A map from the lab's Environmental Restoration division completed in late May shows in bright purple which areas were affected -- but that map clearly doesn't mark all the areas that could be threatened.

For example, the map shows no bright-purple danger zones in Los Alamos Canyon. Officials know it is contaminated and have evacuated entire buildings -- more than 100 workers -- from the canyon.

The same goes for Mortandad Canyon; although no in-depth studies exist about what lies in its depths, lab officials know stretches of that canyon are contaminated because of treated effluent pumped from the waste-treatment facility that sits on the canyon's rim.

But Mortendad is not marked as a problem on the lab's map of potential problem sites.

Canepa said she didn't mark the canyons at all because ``the whole canyons are areas of concern."

Air tests

Despite a clean bill of air health from the federal and state governments, who say the smoke plume coming off the lab the week of May 10 through May 17 did not contain extremely high levels of radiation other than what was naturally coming off the fire, there were almost certainly some man-made radionuclides in the air.

When officials from the state environment department later received the results of in-depth isotopic analysis tests of the air-monitor filters from that week, they found that at least two air monitors had picked up trace amounts of americium, plutonium and depleted uranium.

Two of the radionuclide hits were at the air monitor at the White Rock fire station -- faint traces of plutonium and uranium were found on the air filter. Another, just miles down the road at the juncture of N.M. 4 and N.M. 501, picked up americium levels in the air three times higher than the minimum detectable amount.

Americium is a byproduct of decaying plutonium. John Parker, chief of the New Mexico Environment Department's DOE oversight bureau, said americium was found at 199 atocuries per cubic meter of air. (An atocurie is 10 to the negative 18th of a curie.)

The air sample in question was taken during a 48-hour period from May 13 to May 15 -- the days the fire was burning on lab property.

However, Parker said, the levels were clearly no threat to public health.

``We did some back-of-the-envelope type calculations and determined that if someone had resided at that location (where the americium was found) at the time of the fire, they would receive less than one millirem of radiation based on our reading," Parker said. An average person living at this altitude receives about 300 millirems a year.

At the White Rock fire station, the in-depth lab tests of the air filters showed a level of 96 atocuries of uranium-238 (detectable levels start at 78 atocuries per cubic meter of air), and 15 atocuries of plutonium (the minimum detectable level is 14 atocuries).

All of those levels are negligible, Parker said, and are so low as to be questionable whether they were ``real."

``It's a very small number, and people shouldn't be concerned," he said. ``If it's real, though, it suggests that indeed there was a release. The proximity to Area G (a storage area for plutonium) is such that one could develop a scenario where the origin of (the air contamination) could have been from a lab operation."

So what does that mean?

Environmentalists say even the trace amounts are significant because they show there was, after all, a radioactive release from the fire -- and contaminated areas burned that are now exposed to open air, wind, and rain.

The cleanup

Despite being adamant that the burn poses no hazard to people downstream, lab workers have begun work to keep sediment on lab property.

Two sediment-retention structures have already been built at Technical Area 18, a weapons work area where plutonium is used. Technical Area 41 in Los Alamos Canyon has been evacuated. Other buildings in Los Alamos Canyon, including a cooling tower around an old nuclear reactor known as Omega reactor TA-2, are being removed from the canyon entirely.

Johnson Controls Northern New Mexico, which has been contracted to do much of the environmental restoration work, has begun reseeding areas and laying out jute mats and hay bales. The company is also doing work on various culverts and felling or removing dead trees from areas that were burned.

The Los Alamos reservoir is being drained and dredged so when the rains come, the reservoir can hold back some of the flooding.

Lab officials are working with flood and erosion specialists to use little tricks such as leaving logs or stumps on the ground to hold back floodwaters. Also, lab environmental workers are sampling alluvial wells and sediments in some of the potential release sites to determine baseline contamination levels at preflood conditions.

Implications

For some watchdog groups, the uncertain aftermath of the Cerro Grande fire just serves to reinforce an old refrain -- the University of California, which runs LANL, needs to commit to cleaning up the 2,000 potentially contaminated sties in Los Alamos County.

In the last decade, LANL has received anywhere from $40 million to $60 million each year for environmental cleanup.

``I would like to have more money," said Canepa, who has overseen much of the cleanup in recent years. Canepa said the lab's environmental-restoration division has followed the state's instructions on which sites should be a cleanup priority. A waste dump (dump P) in Technical Area 16, for example, has been excavated in recent months by a remote-controlled robot.

Also, the lab has been doing risk assessments in the canyons and has plans to do in-depth studies of all the canyons similar to what was done at Los Alamos Canyon.

But watchdog groups say the fire highlights just how much has not been cleaned up.

``Los Alamos sucks in so much money each year -- a tremendous amount for cleanup -- and yet so few sites seem to get cleaned up," said Christopher Paine, an analyst with the National Resources Defense Council, an anti-nuclear group out of Washington, D.C. ``The state regulators don't appear to have a comprehensive map of all the contaminated sites. They're sitting around trying to figure out what would happen in a rainstorm, and they don't even know what's out there."

The New Mexico Environment Department does have oversight over the lab's efforts at cleanup, and those state regulators feel the lab has its heart in the right place in this case.

``They're trying to assess what's bad and what isn't -- and that's the right thing to do," said James Bearzi, chief of the state's hazardous- and radioactive-materials bureau. ``Trying to keep the contamination from the river is the right thing to do, and we're pushing the lab to do it.

``We don't want to get sucked into the debate of whether there's any `risk' to the public. We want them to do the right thing. So far, the indications are they will."

Author: KRISTEN DAVENPORT, photos by Craig Fritz
Section: Main
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6/17/00
ABQ TRIB

Latest Los Alamos incident further bruises a community and prompts scrutiny of a secret, scientific culture

By Lawrence Spohn
LSPOHN@ABQTRIB.COM / 823-3611

LOS ALAMOS — After a half-century of being king of the science hill, Los Alamos National Laboratory finds itself tarnished and under siege.

In rare bit of good news Friday, two missing computer hard drives containing nuclear-weapons information were found in the lab's X Division.

Still, the recovery of the hard drives has only prompted more questions about what's going on at the top-secret, nuclear-weapons lab.

Critics from Washington, D.C., to California this week snapped at Los Alamos' lofty reputation — utterly astonished that a place of such intelligence could act so stupidly in keeping track of such highly sensitive material.

Los Alamos probably is in no danger of toppling from "up on the hill" — a phrase used to describe both its place in the scientific landscape and its physical location on a collection of fingerlike mesas that jut from the Jemez Mountains in northern New Mexico.

But critics and supporters agree that Los Alamos today is a troubled place, where community confidence is shaken and lab morale battered, where very fundamental questions are being asked about its role, capabilities, management and future.

Dennis Cook/The Associated Press

Los Alamos National Laboratory Director John Browne (left) and Department of Energy Intelligence Director Edward Curran talk during a hearing this week on Capitol Hill in Washington, D.C., about the lab's missing computer hard drives. The drives were located Friday, appearing behind a copying machine inside the lab's X Division.

Anchored in history as the place where the first atomic bombs came together during the fabled Manhattan Project in 1945 and as the first of the three U.S. nuclear-weapons labs credited with winning the Cold War, Los Alamos Lab's institutional psyche has been scarred repeatedly in the last 18 months by:

- Charges early last year that the lab was the source of foreign espionage and the alleged theft of top-secret, nuclear-weapons designs by Chinese agents, including the modern W-88 warhead.
- The indictment of a former employee, Wen Ho Lee, on charges that he copied and electronically moved

Please see **LOS ALAMOS/A6**

LOS ALAMOS BY THE NUMBERS

Los Alamos National Laboratory
- Budget: $1.2 billion.
- Employees: 6,800.
- Contractor employees: 2,800.
- Scientists' expertise: 33 percent physicist; 25 percent engineers; 16 percent chemists or material scientists.
- Area: 43 square miles.
- Primary mission: nuclear-weapon research.
- Other research: virtually all scientific fields, including the Human Genome Project and NASA missions.

Los Alamos County
- Size: 109 square miles, smallest in New Mexico.
- Population: 18,234, 20th in state.
- Per capita income: $32,095, first in state.
- Income ranking: 40th richest in the country, 141 percent of the national average.

nuclear-warhead secrets outside the lab's secure fence. Lee is being held in a Santa Fe jail.

- The exposure last spring of eight lab workers to plutonium contamination in Los Alamos' highly secure, heavily monitored and often-criticized plutonium-processing facility.
- The Cerro Grande Fire, which singed more than 9,000 acres of the laboratory; claimed 260 dwellings in Los Alamos, including the homes of many lab workers; and caused widespread public concerns over hazardous and radioactive pollution in the fire's smoke. Critics have complained the lab wasn't honest about the fire's effect on the lab and public health.
- And finally this week, the announcement that the lab could not account for the two computer hard drives, which contained secret data intended to be used by a special team to disarm U.S., and possibly some foreign, warheads in an emergency.

Beneath the black-edged ridges and peaks of the ash-covered Jemez Mountains, Los Alamos business advocate Susan Musgrave considered the pileup of recent developments and said: "It comes at a terrible time."

Musgrave, who is member services director for the Los Alamos Chamber of Commerce, added solemnly: "We exist because of the lab. And if the lab leaves, we die."

Still, for all the bad news, Los Alamos County spokesman Bill Lehman said, "You have to be impressed with the resiliency of the people here."

Lehman pointed out that despite "the devastating experience of the fire and all this other stuff, people evacuated and returned without incident, there hasn't been loss of life, and there are a number of things to be thankful for."

Not the least of these, he said, are the integrity, strength, intelligence and character of the locals — a direct reflection of the lab.

"They're highly educated, and it's not easy to knock them off their heels," he said.

But Lehman said the reaction this week to the furor over the lost drives has been a hand to the head and the question: "Oh, my gosh, this all over again?"

"Are the locusts next?" he asked. "Is famine just around the corner? There is a dark side to all of this and people are asking 'Can it get much worse?'"

At the lab, several employees say the mood is equally dark.

At the lab's public-affairs office — which is next to the construction site for the lab's new $90 million Strategic Computing Complex — Kathy DeLucas shrugged and asked: "What next? When do we get the plagues and pestilence?"

View from the hilltop

Around Ashley Pond in the city, south of Fuller Lodge where Manhattan Project scientists socialized and started the lab's tradition of scientific colloquia, lunchtime picnickers seem oblivious to the turmoil.

Near trees wrapped in green ribbons, tied to express community gratitude to those who helped during the fire, a couple immediately become defensive when the issues are raised.

He is a 30-year-old chemist at the lab who declined to be identified for fear of lab retribution. She is a 31-year-old who also declined to be named, concerned that her companion would be identified by his association with her.

Asked whether such fears of retribution are justified, the man shrugged. His companion seemed surprised when he said that "working under a microscope is not a very positive experience."

Both freely expressed views that lab morale is bad, that the lab's image is at an all-time low and that the growing sense of community between the lab and the town since the fire may be strained.

Lab Director John Browne, returning from a week of congressional hearings Friday, declined to be interviewed.

Lab spokesman John Gustafson said that while management was "extremely pleased" the missing hard drives had been found, officials acknowledge the incident is among a number in recent months that have been discouraging because they have "overshadowed much of the high-value, high-quality work that we do."

"Each one does make it more difficult for us to recover," Gustafson said.

Gustafson said critics, the media and political leaders are focusing on the lab problems, rather than internal reforms such as instituting project-management controls to address construction cost overruns or delays.

But even the lab's supporters say it's time to clean house and present to Congress, if not America, a well-oiled, lab engine that runs without breaking down every few months.

"I've never been very impressed with lab management," said Bert Kortegaard, a retired Los Alamos Lab engineer who lives in nearby White Rock. "They've never been very professionally managed, but then I'm not an Ivy League physicist, which is typically the kind of people running Los Alamos."

Los Alamos is managed by the University of California under a contract with the Department of Energy. While Kortegaard said he has long felt that the lab's semiacademic environment is one of its strongest points, he said it has resulted in management that would not be tolerated anywhere else in America.

"I mean, you have really got to meet the goals of the lab and national security," he said. "There needs to be discipline."

But in that regard, he said, the lab "has been flawed since the day it began" when some of the world's most important scientists were drawn "to the hill" by physicist Robert Oppenheimer to work on the Manhattan Project.

Kortegaard said the lab is faced with the enormous challenge of attracting and encouraging the nation's — indeed the world's — best and brightest scientists to think outside the box while remaining inside the box of lab security.

Few outside Los Alamos itself and the other nuclear-weapons labs understand the difficulty of doing cutting-edge science in a closed security environment, Kortegaard said. He is among those who fear that the lab's reputation has been so damaged that it will have serious difficulty attracting top college graduates.

Lab officials acknowledge problems already in this regard but say recruitment difficulties also may reflect the heavier emphasis on security at the lab, including the prospect of polygraph examinations.

Kortegaard said most Americans know little about the realities of Los Alamos, but he does agree with critics that protecting classified information must take place. Most at the lab know and practice that, he says.

While he favors exposing the lab's problems to the public to gain a better national understanding of it, he said the community's mood right now is "'God bless it, why did this have to happen now?'"

"I'm concerned about how much more we can take," he said.

X marks the spot

Gustafson said there are concerns, particularly in the lab's once heralded, now pilloried, X Division about getting severely behind schedule.

He said the division, the core of the lab's nuclear-weapons design program, has had to deal with the espionage investigation last year; the long work interruptions caused by the fire; the difficulty of restarting the work, especially with some employees dealing with personal emergencies caused by the fire; and "now this."

Charles Cranfill, an X Division physicist, said he and colleagues had searched for the drives everywhere and are in "stand-down mode, reviewing our security procedures."

"We're trying to improve and identify other possible weaknesses," he said. "We have to try to plug up those cracks."

Cranfill said that when the division was informed about the latest security snafu, there was a collective groan.

"Everybody says: 'That's all we need. After the Wen Ho Lee thing and the fire, that's all we need now,'" he said.

"But clearly," he acknowledged, "we have more work to do to bring our security procedures up to snuff." He said he and his colleagues "are very annoyed" about the recent lapse.

Slash and burn

Generally, external lab critics, including several nuclear-weapon watchdog groups, do not see Los Alamos lab's problems as particularly unique or new.

They say they are symptomatic of the entire nuclear-weapons program that has been, they say, increasingly coddled since the end

For much of the past decade, they charge, program budgets have been increasing despite global pressures for nuclear disarmament, a national mood to cut federal spending and balance the budget, and questionable performance by the nuclear labs.

"Los Alamos isn't just suffering from a scorched landscape but from a scorched ideology," said Greg Mello, a physicist and policy analyst at the Los Alamos Study Group in Santa Fe.

Contending the nuclear-weapons lab complex is being rewarded for failure, deception and arrogance, critics advocate:

- A complete Los Alamos Lab management housecleaning.
- Cancellation of the University of California's Los Alamos management contract.
- Adoption of a corporate management model, like that used at Sandia National Laboratories in Albuquerque.
- Widespread budget cuts, particularly in the Science-Based Stockpile Stewardship program, where costs in some projects have doubled or tripled.

Intended to ensure U.S. warheads are safe, the stewardship program is building advanced nuclear-bomb blast simulators and supercomputers to replace detonation of nuclear weapons.

Chris Mechels, a computer scientist, and Leo Mascheroni, a fusion physicist, are former Los Alamos Lab employees who say the lab is managed as though Los Alamos were an academic campus, not a bomb lab. They contend that security has been lax for decades and that the lab's culture continues to resist, even ignore, DOE and public oversight.

"The culture, the management, thinks it's above the law," Mascheroni said. "You would think after all this espionage scandal last year that they would be very well-regulated. But nothing really changed. It is all PR (public relations)."

Mechels said: "Nobody, I mean nobody, holds them accountable. If a problem like this hard-drive thing develops, they just get more money to fix it. But, actually, they never do."

Marylia Kelly, director of the TriValley Cares citizens group in Livermore, Calif., said she has sympathy for those affected by the fire but none for anyone in Los Alamos whining about hard times.

"This is one of the really few times that these labs have had to undergo any kind of outside review," she said. "To date, it's been so weak and this is long overdue."

She says the security incidents at Los Alamos are an indication that the nuclear-weapons labs are "out of control" and need a "thorough public review and debate of their mission."

Kelly said the sparse information coming out of Los Alamos during the fire, in particular on the atmospheric emissions, shows the disdain with which Los Alamos holds its neighbors.

Lab officials initially insisted the fire had smoke and airborne ash contained no hazardous or radioactive elements above background levels.

In recent days, however, officials have talked about fire costs and damages in the hundreds of millions of dollars and acknowledged emissions were three to 10 times higher than normal background levels.

The lab's Gustafson said "there were some glitches in the data," but he maintained the emissions contained no contaminants from the lab.

On Thursday, some 100 forest firefighters wanted off fire remediation crews, fearing exposure to lab contamination.

Back on the hill

Business advocate Musgrave acknowledges that the events in the recent year do "unnerve" some in the town. She expressed what she says is a common community feeling, and particularly among businesses, of wanting to support the lab but wondering why it seems incapable of following basic common-sense rules.

She added, however, that many lab-watchers in the community are empathetic because they know the federal government has relaxed security rules in recent years and that Los Alamos was following those guidelines.

"People say, 'Come on, guys, let's get back on top of this,'" she said. "'Let's get these security issues resolved.'"

Inside the Bradbury Museum, students and faculty members from Duke University were being briefed by Director John Rhodes while other visitors milled through the collections and exhibits, including full-scale models of Fat Man and Little Boy, the bombs dropped on Japan.

A new museum exhibit displays pictures and large maps, produced by the lab, that track the progress and intensity of the Cerro Grande Fire.

The exhibit includes a small placard titled "Here's to the heroes" -- expressing thanks to all those who helped during the fire crisis.

"It's very sobering, very humbling," docent Sandy Knight said.

Asked about the espionage allegations from last year and the recent news of once-missing nuclear computer hardware, Marlene Henderson, 51, of Evergreen, Colo., laughed and held up her hands.

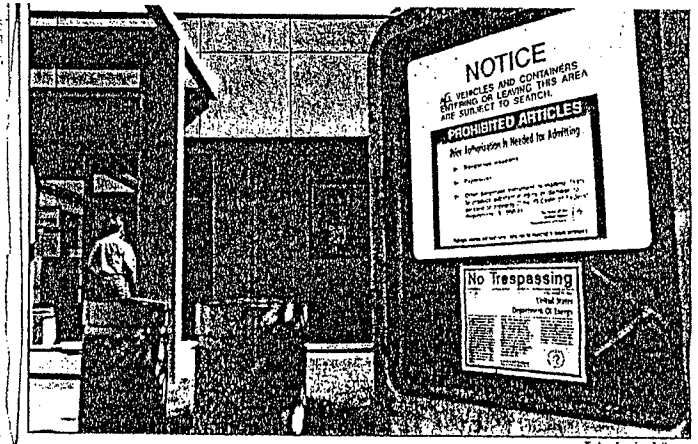
"I didn't take anything," she said.

Growing up during the Cold War, she expressed respect for the role Los Alamos played in protecting the nation.

But she said: "I hope we are scrutinizing the billions of dollars that go into this and other places that are like it.

"They should be held accountable, just like we are in the schools," said Henderson, a school principal.

Henderson raised an eyebrow and said: "I think if we can keep the secret recipe for Kentucky Fried Chicken, we ought to be able to keep those nuclear secrets more secure at Los Alamos."



Toby Jorrin Tribune

Lab employees approach a security checkpoint leading toward the administration building. Los Alamos resident Susan Musgrave noted the security problems have people in town talking. "People say, 'Come on, guys, let's get back on top of this,'" she said. "'Let's get these security issues resolved.'"

J. Pat Carter/The Associated Press

John Browne, director of Los Alamos National Laboratory, was flanked by other officials during a news conference in May after the Cerro Grande Fire encroached on lab property. Lab management has come under scrutiny after recent problems, both from longtime supporters and constant critics.

Los Alamos Under Siege After Secrets Recovered
DAVID MALAKOFF.
Science 288.5474 (June 23, 2000): p2109. From *Student Edition.*

Science

Smaller than a paperback spy novel, the secrets-packed computer hard drives that temporarily disappeared at the Los Alamos National Laboratory in New Mexico could spark big changes in science and security at the country's nuclear weapons laboratories.

As Science went to press, investigators were trying to determine if the disks--missing from a vault since at least 7 May and discovered behind a nearby copying machine on 16 June--were pocketed by spies or just mislaid by employees. Their disappearance touched off a debate about how useful they might be to a rogue nation or terrorist group. Energy Secretary Bill Richardson says he believes the disks never left the premises and "espionage was not a factor." But he isn't waiting for a final report to slap new controls on the flow of sensitive lab information. He has already blamed the lab's contractor, the University of California (UC), for the lax security, raising the possibility that the Department of Energy (DOE) may try to sever the university's 57-year oversight of the lab. At the same time, some lawmakers are calling for Richardson's head.

The incident has refocused attention on lab security and revived debate about the fate of Los Alamos scientist Wen Ho Lee, arrested last December and awaiting trial for allegedly mishandling classified information. It has also broken the logjam blocking the confirmation of former CIA official General John Gordon as head of a new National Nuclear Security Administration to improve security and oversee all weapons work. These and other issues were expected to get a high-profile airing at congressional hearings this week, even as several task forces and the FBI investigate how a team that is supposed to help prevent nuclear terrorism lost track of its classified cookbook for finding and disarming weapons.

To date, DOE officials have been intentionally vague about the contents of the laptop computer hard drives, confirming only that they stored information that might help its Nuclear Emergency Security Team (NEST) find, identify, and disarm a homemade atom bomb or stolen warhead. Formed in 1975, NEST has responded to dozens of calls with a team of scientists and emergency personnel equipped with sensitive bomb-finding and -disarming equipment.

Those familiar with NEST have speculated that the hard drives contain information, ranging from bomb radiation signatures to wiring diagrams, that could be valuable to terrorists and aspiring nuclear powers. Even poorly detailed guides to the shape and construction of weapons components, says Greg Mello of the nonprofit Los Alamos Project in Santa Fe, "would be very valuable to a technically advanced but data-starved country like Pakistan. It would shave years off new weapons' development by helping them avoid dead-end research alleys."

A few commentators have proposed an even more frightening scenario: "The missing data also reveal how a stolen bomb might be set off," Gary Milhollin of the Wisconsin Project on Nuclear Arms Control wrote on 16 June in The New York Times. Such fears led Senate Energy Committee chair Frank Murkowski (R-AK) to press DOE officials to confirm or deny that assertion at a hearing last week. They declined, citing security concerns.

Some specialists, however, doubt that even savvy terrorists would be able to defeat the multiple fail-safe devices that prevent an unauthorized user or an accident from detonating a weapon manufactured by one of the major nuclear powers. Although little is known publicly about Russian and Chinese weapons, U.S. and European warheads are known to carry "electronic combination locks," called permissive action links (PALs), notes arms-control scholar Dan Caldwell of Pepperdine University in Malibu, California. PALs automatically disable a weapon if a user makes repeated guesses at the correct digital code, he says. Even a thief with the right code would still face formidable obstacles to detonating the weapon, as sensors must detect an exact sequence of pressure, acceleration, or temperature changes before triggering the conventional explosives that prime the nuclear reaction. In addition, the trigger mechanism is believed to be sealed in a tamper-proof barrier that disarms the weapon if it is pried apart or subjected to unusual electromagnetic bursts. For all these reasons, the idea that terrorists could use information on the NEST hard drives to and a stolen weapon "doesn't seem to be the most plausible" scenario, says Mello.

Still, the disappearance of the disks has reignited a long-running debate in Congress over how to protect U.S. nuclear secrets. Richardson and several senators had long resisted appointing someone to lead the new nuclear security agency, saying that the organization undermines the secretary's authority and would hamper environmental cleanup and civilian science programs at the labs. That resistance evaporated just days after DOE revealed the loss of the hard drives, however, with the Senate voting 97-0 on 15 June to confirm Gordon.

More changes are on the way. In interviews after the disks were rediscovered, Richardson said he had already ordered the reintroduction of document tracking and other security measures abandoned in the early 1990s. He promised to penalize researchers involved in the disk episode, once identified, and he declared that officials at the University of California, which oversees both Los Alamos and California's Lawrence Livermore weapons lab, "have some explaining to do." The university is "very strong on science," he noted, but hasn't "done a good job" on security.

Six members of the House Commerce Committee, including Representative John Dingell (D-MI), want Richardson to dump UC. "It is time for [DOE] to take charge," they wrote in a 16 June letter. Other critics, such as Milhollin, would like to give weapons work back to the Pentagon, which controlled it during and immediately after World War II, saying that it "has a much better security record." UC's contract runs through 2002, however, and spokesperson Rick Malaspina says its "commitment to managing the labs remains strong."

Meanwhile, many Los Alamos researchers are demoralized by the latest publicity and beg to be left alone. "Things were just getting back to normal after the fire," says one scientist. "Now we're right back in the flames."

Monday June 26 6:41 PM ET

Tainted Los Alamos Soil Dug Up

By BARRY MASSEY, Associated Press Writer

LOS ALAMOS, N.M. (AP) - A legacy of the Atomic Age lies in the soil along a canyon about two miles from a reactor once important in nuclear weapons research and manufacturing.

Now there's a race against time and weather to ensure the radioactive-contaminated soil from Los Alamos National Laboratory doesn't flush onto neighboring Indian lands and into the state's largest river, the Rio Grande.

Seasonal rains are expected soon and lab officials fear that could bring heavy flooding because of a fire last month that consumed more than 48,000 acres in and around Los Alamos.

Workers are digging up truckloads of the dirt along Los Alamos Canyon and shipping it to a waste storage site on the federal laboratory's property.

Large swaths of the once-green mountainsides are barren, except for the blackened remnants of pine trees. There's little or no vegetation to slow water or stop sediment from pouring into some of the canyons that lead to the river about 10 miles from the city of Los Alamos.

On Monday, lab officials led a tour of the contamination site and explained the excavation operation that should be finished late in the week.

Lee McAtee, the lab's deputy director of environmental safety and health, said there's no serious health risk from the soil because it has very low levels of radiation. A frequent hiker to the area, for example, would receive a radiation dose equal to riding in an airliner for one hour.

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But McAtee said the lab wanted to ease potential concerns of the public by preventing any contamination from moving off of the government's property.

``We're doing it because we believe it's the right thing from the standpoint of being a good neighbor," said McAtee.

So far, about 360 cubic yards of soil - 33 dump truck loads - have been dug from a sandy area alongside a rocky road that leads up the canyon. Up to twice that much may be removed by the end of the week. The digging started Friday.

Environmentalists welcomed the lab's effort to stop the spread of contamination.

``It's a good idea to do cleanup where cleanup is possible," said Greg Mello, director of the anti-nuclear Los Alamos Study Group in Santa Fe.

Except for the excavation operations - roped-off areas with radioactivity warning signs - there's nothing to visibly suggest the place had become a dumping ground for early makers of the atomic bomb. It looks no different from the high desert canyons all around Los Alamos. A road leading into the area has a gate that warns of possible contamination, but there are no markers of specific contamination sites. The area and road has been open to hikers.

The soil is believed to be contaminated from dumping in the 1940s and 1950s of liquid wastes near a weapons research reactor shut down seven years ago. Rains have carried contaminated sediment down the canyon.

Lab officials selected the area for excavation because it contained among the highest levels of contamination in flood-prone canyons. Once the soil is removed, clean dirt will be brought to the site and then rocks will be placed along the meandering channel - now dry - where water flows when it rains.

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Environment and Nature News

Paper: Albuquerque Tribune, The (NM)
Title: Lab loads contaminated soil along canyon into dump trucks
Author: Barry Massey The Associated Press
Date: June 27, 2000
Section: Local News
Page: A3

LOS ALAMOS A legacy of the Atomic Age lies in the soil along a canyon about two miles from a reactor once important in nuclear-weapons research and manufacturing. Now there's a race against time and weather to ensure the radioactive-contaminated soil from Los Alamos National Laboratory doesn't flush onto neighboring Indian lands and into the state's largest river, the Rio Grande.

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Author: Barry Massey The Associated Press
Section: Local News
Page: A3

Weapons Chief Endorses Low-Yield Nuke Bombs

8/15/00

BY IAN HOFFMAN
Journal Staff Writer

New and precise, low-yield nuclear weapons — perhaps built on designs so simple and rugged they don't require testing — could aid the United States in attacking a range of modern targets, a U.S. weapons executive says.

Los Alamos' chief weaponeer, Stephen M. Younger, envisions a flexible U.S. strategic arsenal of conventional and nuclear weapons of low and high yields. He suggests in a recent paper that accurate, low-yield nuclear weapons could be better suited to attacking buried, concrete bunkers and mobile missiles than today's U.S. arsenal of silo-busting weapons.

A rogue nation threatening biological or chemical attack against the United States or its allies might view a massive, ballistic missile attack "as overkill and hence not a realistic threat."

"Such a reliance on high-yield strategic weapons could lead to 'self-deterrence,' a limitation on

See **WEAPONS** *on* **PAGE 3**

Weapons Chief Backs Low-Yield Nuclear Bombs

from **PAGE 1**

strategic options and consequently a lessening of the stabilizing effect of nuclear weapons," Younger writes in "Nuclear Weapons in the 21st Century," a paper invited by the Pentagon's ranking defense scientist.

Critics say Younger's proposals are the latest in a persistent lobbying campaign by some nuclear weaponeers for work on new bombs and warheads, theoretically made usable by limited damage and radioactive fallout.

"This is all premised on the notion that you can cross the nuclear threshold if you don't make too much of a mess," said physicist Frank von Hippel, a Princeton University professor of public and international affairs.

"This isn't deterrence," von Hippel said. "This is trying to use these things."

That alarms disarmament advocates.

"Right now there is a global norm against use of nuclear weapons," said Greg Mello, head of the Los Alamos Study Group in Santa Fe. "To use a nuclear weapon would martyr the enemy, give cover to (nuclear) proliferants and open us to attack by weapons of mass destruction."

Younger declined interview requests but said through a spokesman that he intended his paper to provoke a discussion of the role of nuclear weapons.

The Persian Gulf War and fear of Saddam Hussein's biological and chemical arsenals fueled a round of low-yield weapons research in the early 1990s, but the effort collided with a moratorium on nuclear testing and lackluster political support. Congress added an extra barrier in 1994 by forbidding engineering work on nuclear weapons detonating at less than the equivalent of 5,000 tons of TNT. Younger's paper coincides with a recent push by conservative lawmakers to bend and perhaps break that six-year prohibition.

A proposed Senate defense bill would overrule legal objections at the U.S. Department of Energy, based on the 1994 law, to research into nuclear weapons to attack hardened command or weapons bunkers buried under hundreds of feet of rock. Colorado Republican Wayne Allard sponsored a provision calling on the Energy and Defense departments to report those targets and ways to destroy them by July.

MARK HOLM/JOURNAL

NEW USE: The 8-inch nuclear-capable artillery shells shown here could be at the core of the design of new nuclear weapons.

Thick-walled concrete bunkers and weapons factories buried under mountains, as suspected in Russia and Libya, could be immune even to high-yield nuclear weapons, says Younger, Los Alamos' associate lab director for nuclear weapons.

An array of other targets could be vulnerable to simple but high-precision nuclear weapons exploding at five kilotons — roughly a third the power of the Hiroshima bomb — or less, he says.

Current weapons could be modified to reduce their yield or tailor their radiation effects, for example, to destroy electronics or biological agents, Younger says, but those changes could be expensive and require nuclear testing.

Younger suggests that fielding precision low-yield weapons could be less expensive and easier than trying to maintain the full, current arsenal of sophisticated, high-yield weapons at a time when weapons designers are leaving the nation's weapons labs.

"We could use gun-assembled or other simple, rugged designs that might be maintained with high confidence without nuclear testing," Younger wrote. "Such designs would require a significantly smaller industrial plant for their maintenance than our current forces. ... Finally, simpler weapons might be maintained with higher confidence for longer periods by a weapons staff that has little or no direct experience with nuclear testing."

Los Alamos' Hiroshima bomb, Little Boy, was a gun-assembled design. A charge of high explosive blasts two chunks of enriched uranium together to create a runaway chain reaction. Scientists were so sure of its operation that the Little Boy model was never tested before it became the first nuclear weapon used in war.

Most weapons designers who exploded their handiwork before a 1992 end to U.S. nuclear testing are expected to retire in the next 20 years.

Younger's ideas "express the ongoing crisis of legitimacy that the laboratory suffers," Mello said. "There is a fairly desperate attempt to stay in nuclear-weapons work, to be legitimate and attractive to new hires."

Younger argues that the time to open the debate on the future of U.S. strategic forces is now, given the typical 10-year or greater delay in fielding new weapons technologies.

"The time is right for a fundamental rethinking of the role of nuclear weapons in national security," he writes. "Prudent thought given to the role of nuclear weapons in the 21st century will reap handsome dividends for the national security of the United States and the stability of the whole world."

Arms-control advocates wince at Younger's ideas but say the debate is overdue.

"It would be great if this was a first word in a discussion of what nuclear weapons are really for," von Hippel said.

"Certainly the GAO (staff) are entitled to their opinions. We continue to disagree with their thought processes.

"Since that report was written, we've had even more reviews," she added, including a weeklong review last week by dozens of experts on an Energy Department-sponsored team.

The activists, who were shown an early copy of the audit by ANG Newspapers, have long been critical of NIF. The Department of Energy believes the laser, designed to produce tiny thermonuclear explosions that can later be harnessed and studied, is critical for ensuring that America's weapons are safe.

STAFF WRITER Glenn Roberts contributed to this report.

Kelley and others have argued that the real objective of NIF is to attract top scientists to Livermore and maybe even to build new weapons -- a violation of American treaties. The project, they contend, is a boondoggle that has slim chance of working as designed.

The GAO conclusions suggest the activists were on target with at least some of their claims.

Several said they felt vindicated by the report.

That doesn't make it any less shocking," Kelley said.

Most troubling, many said, was the finding that DOE and lab officials knew all along the NIF would cost more than $1.2 billion, but pushed the unrealistic figure "in the belief that Congress would not fund NIF at a higher cost."

Managers did this, they told auditors, because "the value of NIF to the future of the Laboratory overshadowed potential cost concerns."

Hisham Zerriffi, senior scientist at the Institute for Energy and Environmental Research, called it "absolutely unacceptable," for agency officials, rather than Congress, to decide what programs are most important to the national interest.

"They had very direct knowledge that the budget being requested was too low, the idea being that once costs were sunk, it would be very difficult for Congress to pull out. That sort of deliberate planning is unacceptable," he said.

"In its body that's scary," said Tarek Rizk, spokesman for Physicians for Social Responsibility. "That's the DOE thinking they know what's good for America, not the people we elect."

Anti-NIF groups, for their part, want to see Congress pull the plug on the project altogether. But, many said, they aren't holding out much hope of that.

At the very least, Rizk said, he hopes that the audit "causes a furor."

It's symptomatic of the fact that DOE acts so often with impunity. In this case it flaunted government oversight, Congress' oversight, by giving intentionally false, low numbers to start the project."

Paper: Albuquerque Tribune, The (NM)
Title: Fed report blasts Livermore Lab over costly laser facility
Author: Lawrence Spohn lspohn@abqtrib.com / 823-3611
Date: August 15, 2000
Page: A7

Nuclear-weapons scientists at a California national lab deliberately misinformed the government about the status, cost and technical problems of a controversial nuclear-weapons blast-simulator program, a congressionally ordered investigation has found. The General Accounting Office, the investigative arm of Congress, recommends in a report scheduled to be released Thursday in Congress that the Department of Energy now "arrange for an outside scientific and technical review" of the National Ignition Facility.

Critics are using the report's findings to call for a criminal investigation into the troubled $4 billion program, promoted as the world's most powerful laser and now under construction at Lawrence Livermore National Laboratory one of the nation's three nuclear weapons laboratories.

The other two are in New Mexico: Los Alamos and Sandia national labs.

The 43-page GAO report concludes that "paying for NIF's cost overruns has broad implications for DOE's nuclear-weapons program," now costing $4.5 billion a year with pending congressional bills set to boost it to $4.88 billion next year.

GAO observes that DOE "tried but has been unable to secure agreement among its three weapons laboratories that will use NIF. . . about how, when or at what cost NIF should be completed."

It recommends that Energy Secretary Bill Richardson "not reallocate" funds from other nuclear-weapons programs unless DOE "certifies" it "will not negatively affect the balance" of the program.

Richardson, who is expected to deliver to Congress next month a new schedule and budget for the facility, so far has said he intends to proceed with full funding and completion of the laser whose mission is to simulate nuclear bomb blasts in the lab in lieu of underground nuclear testing.

Livermore public affairs spokeswoman Susan Houghton said both Livermore and DOE disagree "vehemently" with the GAO's numbers and have concluded that project is "only $1 billion over budget and only in the construction area."

"Yes, we acknowledge there were many problems, and we should have done things better," she said. She admitted that Livermore still has yet to overcome the problem of damaging the laser's optics when it is fired.

Originally proposed at about $400 million last decade and finally funded at $1.2 billion by Congress, the facility is now estimated by the General Accounting Office to be nearly $3 billion over budget and at least six years behind schedule with significant technical issues still unresolved.

The GAO is expected to release the report publicly Thursday after the two congressional committees that asked for the investigation have responded to it.

Storms flood canyons on LANL property

6/29/00 SFN.

▶ *Lab officials say neither of the canyons struck by monsoon rains is highly contaminated*

By KRISTEN DAVENPORT and GEOFF GRAMMER
The New Mexican

Rain fell Wednesday in Los Alamos, and several canyons on Los Alamos National Laboratory property flooded after heavy storms pounded the southern portion of the nuclear-weapons laboratory.

Declaring an unofficial beginning to New Mexico's summer monsoon season, meteorologists say more rain can be expected in coming weeks on the 48,000 acres burned by the Cerro Grande fire in May.

"It's pretty safe to say this is the start" of the monsoon season in Northern New Mexico, said Kurt Van Speybrock of the National Weather Service.

Water Canyon and Pajarito Canyon — both on lab property — received substantial rains, causing water and sediment to flow toward the Rio Grande. But lab officials say neither of the canyons that flooded are highly contaminated with radioactive materials or other toxic chemicals.

■ Congressional panel OKs $661 million Cerro Grande aid package. Page B-1

It also wasn't clear whether the floodwaters reached the Rio Grande or whether they soaked into the canyon bottoms before reaching the river.

The water flowed several feet higher in the canyon but apparently did not wash over canyon rims except in isolated areas.

Activists and environmentalists have been worried in recent weeks that ash and sediment in the lab's contaminated canyons could wash downstream in heavy rains.

"Water Canyon flooded pretty heavily," said Lee McAtee, the lab's director for environmental health and safety.

"There's not much contamination in either canyon," McAtee said. The lab did take samples of the runoff water to check for contaminants; however, the results won't be back for three to four weeks, he said.

One of the lab's water-monitoring devices also washed away in the floods.

Canyons that are more heavily contaminated — such as Los Alamos Canyon — did not flood, McAtee said. Workers have been moving tons of radioactive sand out of Los Alamos Canyon in case of heavy rains. About half an inch fell above Los Alamos Canyon.

Most of the rain fell between 11 a.m. and noon, causing N.M. 501 to be closed for several hours. Also, the entire county of Los Alamos and the lab lost power for about three minutes.

"It was likely due to lightning," said

Please see **LOS ALAMOS,** Page A-3

Continued from Page A-1

Don Brown, a spokesman for Public Service Company of New Mexico.

Wednesday's rain also caused lab officials to worry about Technical Area 18, a nuclear-weapons criticality area where scientists perform experiments with radioactive materials. Materials stored in the TA-18 buildings — which sit just feet above the Pajarito Canyon bottom — will be moved to another area, McAtee said.

Liquid radioactive uranium nitrate in polyethelyne bottles could be at risk if the buildings were breached by floodwaters, he said. Also, the lab will bring in steel sheets, which will be buried 10 feet deep, to shore up the walls of the nuclear facility.

Other solid radioactive material will remain at the site in steel containers.

Some activists aren't sure LANL even knows what is in the canyons and therefore isn't able to say what might have washed into the river.

"I can't agree that Water Canyon is not contaminated," said Greg Mello, of the Los Alamos Study Group, a lab watchdog group. "To my knowledge, the lab has never given the public or the state any inventory of the contaminants in the canyon."

Mello said Cañon de Valle, which is known to contain high explosives and some radioactive material, flows into Water Canyon. Several nuclear-waste dumps sit on the edge of Cañon de Valle.

But McAtee said the lab remains confident there is no threat to public health from flooding and said LANL is moving as fast as it can to move contaminated dirt; to mulch burned areas; and to take other precautions against erosion.

As of Tuesday, only 14 of the lab's 91 contaminated sites affected by the fire had been taken care of. Officials expect to have all sites taken care of by mid-July.

"Some of these things take time," McAtee said. "You don't just go out and move nuclear materials around. You have to make sure it doesn't create (more problems)."

And they are moving the contaminated dirt just in time. Meteorologists from the National Weather Service in Albuquerque say the rainy season is here.

Van Speybrock said although most people associate the monsoon season as a time when the rains hit, a monsoon is actually defined as a climatalogical change of the wind, which he said has been occurring in the Northern New Mexico. The moisture is only a byproduct of that wind change.

The moisture accumulates because of the slowing winds this time of year, he said.

In the town of Los Alamos, the water did wash away some ash and debris accumulated from the fires, said Capt. Wayne Brownley of the Los Alamos Police Department.

"It was black water coming off that mountain," said Brownley, adding that the flow of water peaked around 2 p.m.

That flow, according to Brownley, was slowed down by bales of straw and other measures put in place by volunteers since the Cerro Grande fire.

UC May Lose Key Role at Nuclear Labs
Security lapses prompt call for new overseer

Bernadette Tansey, Tanya Schevitz, Chronicle Staff Writers
Saturday, July 1, 2000

URL: http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2000/07/01/MN69166.DTL

LIVERMORE -- Reacting to recent scandals over the handling of nuclear secrets, Energy Secretary Bill Richardson signaled his intention yesterday to strip the University of California of sole management control over national laboratories at Livermore and Los Alamos, N.M.

The Department of Energy is strongly considering a separate contract with a new partner or partners who would oversee security and possibly other management functions, an agency spokesman said. Such a move would end UC's decades-old history as the exclusive contractor at the two labs.

Richardson has been fending off demands that he resign or revoke the university's contract after security breaches at Los Alamos, where scientist Wen Ho Lee was accused last year of transferring secret data files out of secured computers, and where two hard drives crammed with nuclear bomb details were missing for weeks this spring.

Richardson said the lapses call for restructuring UC's contract in negotiations to begin immediately.

``The University of California's performance in managing security at our weapons laboratories is unacceptable and must be immediately addressed," Richardson said.

He acknowledged, however, that UC brought an ``unparalleled scientific reputation" to its direction of research at the labs.

The university will retain management of nuclear research and other scientific programs at the two labs through the end of the current contract, which expires in 2002, said a Department of Energy source. But the official said Richardson's announcement cannot be taken as a signal of the agency's plans for future contracts. The Energy Department could extend UC's historic role as the sole manager for scientific programs, or put the next contract out to a competitive bid.

The Energy Department is considering a full range of options to fix security problems at the labs, including a separate contract with a private firm or the involvement of a government agency, an Energy Department official said.

UC Regent William Bagley said that having the government take over the security at the laboratories could be good for UC.

`WE ARE SCIENCE FOLKS'

``We are not spy folks, we are science folks. So if the government would like to supervise the security, that is a plus," Bagley said. ``It is their responsibility anyway."

However, he cautioned that they have to be careful to ensure that any new security measures do not interfere with scientific work.

John Davies, chairman of the UC Board of Regents, said the university would not suffer if the government takes a more active role in security.

``The benefit to the university doesn't come from the security. It comes from the scientific interchange between the people on our campuses and the labs," Davies said.

But the idea of a private, for-profit firm supervising the safety of classified nuclear secrets raised alarm bells for Greg Mello, director of the Los Alamos Study Group, an anti-nuclear watchdog organization.

``If there were ever a core federal function, this is it," Mello said. ``I'd rather see the military do this than a private company."

In addition to changes in security management, Richardson is also considering separate contracts for environmental cleanup projects and for the management of projects at the labs.

Richardson was infuriated last year when the university revealed serious problems in construction management for a superlaser project at Lawrence Livermore, the National Ignition Facility, that is now estimated to be at least $1 billion over budget.

The university's role in the management of nuclear weapons labs has been the subject of controversy almost from its origins in 1943 with the Manhattan Project at Los Alamos, which developed the nation's first nuclear bombs. The association has drawn equal fire across the political spectrum. Some critics have said that secret weapons research is inconsistent with academic freedom, scientific independence and openness. Pro-defense advocates have warned that a university is intrinsically ill-suited to the protection of top-secret projects.

Watchdog groups at both Los Alamos and Lawrence Livermore favor putting the contract out to bid in the hope that competition would improve accountability among lab managers for environmental protection and worker safety.

UC'S LUCRATIVE CONTRACT

The University receives $11 million a year to defray the costs of its overhead in managing the two nuclear labs as well as Lawrence Berkeley National Laboratory for the Department of Energy. UC can receive as much as $14 million in extra fees depending on its performance ratings.

Some of that money could be diverted to another contractor if the Energy Department decides to strip UC of part of its management responsibilities, a department source said.

Jeffrey Garberson, a university spokesman on laboratory issues, said the university has not been told that it will lose the security aspect of its contract.

``We know what DOE has told us, which is that we are going to work together to improve security," he said. ``We've been told that they are anxious to restructure."

About 7,300 employees work at Lawrence Livermore, and nearly 10,000 work at Los Alamos.

Richardson has directed General John Gordon, the recently confirmed head of a new Department of Energy security agency, to present his recommendations for the restructured UC contract by September 5.

SECURITY PROBLEMS AT WEAPONS LABS

Security problems have plagued the two nuclear weapons laboratories that the University of California manages for the Department of Energy:

-- 1997: Clinton administration learns of allegations of Chinese nuclear spying at Energy Department laboratories managed by University of California.

-- Oct. 31, 1997: A General Accounting Office report cites three Department of Energy labs -- at Los Alamos, Lawrence Livermore and Sandia

-- for lax security. The report says that thousands of Chinese and Russian researchers and officials without security background checks gained access to the nuclear weapons laboratories.

-- March 8, 1999: Los Alamos weapons designer Wen Ho Lee is fired over suspicion that he handed nuclear secrets to China in the late 1980s. Energy Secretary Bill Richardson orders polygraph tests on about 700 laboratory employees.

-- March 14, 1999: The Clinton administration concedes that the Chinese government had made significant nuclear technological advances from secrets stolen from the Los Alamos lab.

-- March 30, 1999: The Energy Department discloses that Los Alamos received a less-than-satisfactory security rating for 1998.

-- April 6, 1999: The Energy Department suspends all scientific work on computers containing the United States' most sensitive weapons secrets at Los Alamos, Lawrence Livermore and Sandia labs.

-- June 1999: The President's Foreign Intelligence Advisory Board criticizes the Department of Energy and University of California for a ``half-hearted, grudging accommodation'' and a ``smug disregard'' for security.

-- Sept. 10, 1999: The University of California disciplines three officials at Los Alamos for their role in the espionage investigation.

-- June 2000: An FBI investigation of espionage at U.S. nuclear labs is criticized in a classified Justice Department report that asserts the probe was slow and may have failed to detect more security breaches.

-- June 2000: Energy Department officials report that two computer hard drives containing nuclear weapons secrets are missing from a vault at Los Alamos. Six senior scientists are later suspended from Los Alamos. problems at weapons labs

-- Research by Scott Kerrihard / The Chronicle

E-mail Bernadette Tansey at tanseyb@sfgate.com and Tanya Schevitz at schevitzt@sfgate.com.

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Three voices tell one story about smoke

By JOHN BARTLIT
For the Monitor

Many north central New Mexicans are confused and greatly troubled about what was in the air emissions from the Cerro Grande Fire. Was it safe to breathe?

Three "government" voices reply in the media and in public meetings. These are the voices of the Los Alamos National Laboratory, the New Mexico Environment Department, and the U.S. Environmental Protection Agency, all of whom monitored the air during the fire.

These varied voices bring a single message: Wood smoke is bad to breathe and the smoke from burning buildings is worse. Yet, other than its being smoke from burning trees and homes, there was nothing bad about Cerro Grande smoke because of Los Alamos National Laboratory and its past and present activities.

Many still doubt and worry, but there's more. Each of us gives or withholds our trust according to our unique background and resulting beliefs. It proves we're human. This trait means more folks will trust information, the more different, appropriate channels it may come through.

New Mexico Citizens for Clean Air & Water

The Los Alamos Study Group — a frequent critic of the Los Alamos National Laboratory and its activities — gives their view of the risk of the Los Alamos fire smoke. This very different voice brings the same message as the "government" voices: That is, other than its being fire smoke, there was nothing special in it that could threaten the health of any member of the public who was more than a couple of miles from the fire.

The Los Alamos Study Group and Los Alamos National Laboratory disagree about many things and doubtless will disagree again. They often disagree about what nuclear policies are in the national interest; they disagree about the harm of very low levels of radiation.

Yet they agree about the fire smoke. In broad terms, the LA Study Group and the LANL say: The smoke posed no risks to public health more than any large fire anywhere. Such agreement from disparate voices should add peace of mind for more New Mexicans than does information that comes from any one sector.

The Los Alamos Fire Update #2 (dated June 9, 2000) from the Los Alamos Study Group reads as follows:

"While wood smoke itself is hazardous, and the smoke from burning buildings still more so, all available information strongly suggests that there were no concentrations of radioactive or toxic materials in the smoke from the fire's passage through LANL that could have threatened the health of any member of the public who was more than a couple of miles from the fire.

"This statement can be made with confidence based on available monitoring data, on knowledge of what materials could have burned (which materials actually did burn is still partially unknown), on a limited understanding of the physical processes involved in the fire, and on data from prior experiments and nuclear accident simulations conducted elsewhere.

"We believe that none of the LANL's major holdings of radioactive or toxic materials (either stockpiled materials or wastes) burned or were in any other way seriously affected by the fire. Even if Los Alamos National Laboratory had attempted to keep such an event secret, we believe that it would not have been possible to do so, especially for this long.

"There were minor contaminant releases, of course; we just don't know yet what they were. Some hazardous materials were exposed to the fire, both on the ground and presumably also in structures, utilities, etc. which burned. We do not have detailed information about which materials actually burned, were volatilized by the fire, or were otherwise released, or in what quantities they were released.

"Depleted uranium is an example of a material that may have been present in the smoke, and is discussed further below. But to repeat, we believe that such releases could not have been of public health significance for people further than a mile or two from the fire."

LANL plan calls for $1.6 billion test facility

7/2/00 NM

By KRISTEN DAVENPORT
The New Mexican

Los Alamos National Laboratory is developing a plan for a new $1.6 billion nuclear facility, complete with miles of underground tunnels to channel and transport radioactive chemicals and avoid releasing radiation into the air.

The Department of Energy requires the national nuclear-weapons laboratory to maintain a 10-year site plan outlining where LANL managers want the lab to go. Comprehensive Site Plan 2000 shows that the lab is pushing forward with a weapons facility first conceived in the mid-1990s called the Advanced Hydrotest Facility.

The hydrotest facility would be a sequel to DARHT, the Dual-Axis Radiographic Hydrodynamic Test Facility. DARHT is a $260 million LANL building used to take X-rays of nuclear pits during simulations of nuclear explosions.

Scientists are not allowed to do aboveground or underground testing of nuclear weapons; instead, they say they rely on such facilities to take pictures of simulated explosions to know how weapons will behave under certain conditions.

The information obtained by hydrotests at DARHT or AHF is used to maintain the nation's stockpile of nuclear weapons, predict how weapons components are aging and see what needs to be replaced in old

Please see LAB, Page A-2

Los Alamos Study Group research contributed to this article.

LAB

Continued from Page A-1

weapons, scientists say.

Opponents, however, say DARHT — and even more, the $1.6 billion planned hydrotest facility — could be used to help scientists develop new, more powerful nuclear weapons.

"This could be the world's premier facility for designing weapons of mass destruction," said Greg Mello of the Los Alamos Study Group, a watchdog organization. "It's evil. And illegal, too."

Lab officials say it's necessary to maintain the stockpile and say no new weapons are being built through the facilities.

"Essentially, stockpile stewardship is much, much, several muches more difficult than designing new weapons," said lab spokesman Jim Danneskiold.

The Comprehensive Site Plan outlines other lab wishes as well — a $49 million gym for employees and the closure of Pajarito Road to traffic to reduce security concerns. It also outlines ideas for a replacement for the aging Chemistry and Metallurgy Building and the possibility of bioscience — including technologies surrounding biological weapons — as another pillar of future lab work.

The plan comes at a vulnerable and unusual time in the Los Alamos laboratory's 60-year history — when the future is perhaps more uncertain than it has ever been. In the wake of several recent security scandals, more national and political attention is being focused on the weapons laboratory's future and its role in a world after the Cold War.

Department of Energy Secretary Bill Richardson announced this week that the DOE is looking at changing the management of the lab, taking away security management from the University of California, which has managed LANL since 1943. And some members of Congress have su gested taking oversight nuclear weapons away from t Energy Department.

So whether the people w appropriate money to t weapons labs will suppc LANL's $1.6 billion plan unclear.

Danneskiold said that rig now there are not even any sol plans for how or when tl Advanced Hydrotest Facili would be built.

"Right now, it's entirely conce tual," Danneskiold said. "The are no construction plans."

It could be 10 years befo construction begins, he said.

The new facility would be highly technologically advanc version of DARHT, using prot radiography, the science unproven so far — of using pr tons to take snapshots similar X-rays, providing for higher re olution in pictures. Also, th AHF would be able to take pi tures of simulated nuclear expl sions from six axes, or angle while DARHT only has two axe

The Comprehensive Site Pla also talks about building tunne leading to and from the AH area to transport nuclear mater als and radioactive beams con ing from the accelerator at nearby area.

Although construction plan are still years away, the Compr hensive Site Plan indicates th the core area for the AHF woul be just east of Technical Area on the eastern side of the lab nea San Ildefonso Pueblo property.

The plan indicates that the cost for AHF would be about $1.6 bi lion — a larger budget even tha the National Ignition Facility, major stockpile-stewardship cer ter at Lawrence Livermor LANL's sister weapons lab.

DARHT, built in the mid-'90s was originally estimated to cos $187 million, but that balloone to $260 million.

7/4/00 AJ

Lab Announces Several Building Objectives

The Associated Press

LOS ALAMOS — Los Alamos National Laboratory wants to build a new $1.6 billion nuclear facility that would allow scientists to conduct simulated explosions that replace banned actual nuclear tests.

The proposed facility also would have miles of underground tunnels for transporting radioactive chemicals. Lab officials believe by transporting the chemicals underground, they would avoid emitting toxins into the atmosphere.

The Department of Energy requires the laboratory to maintain a 10-year site plan outlining its future direction.

The plan, called Comprehensive Site Plan 2000, also outlines other initiatives, including a $49 million gym for employees, the closure of nearby road to reduce security concerns and researching biological weapons as another pillar of future lab work.

The major initiative, dubbed the Advanced Hydrotest Facility, would be used to maintain the nation's nuclear weapons stockpile, predict how weapons components are aging and see what needs to be replaced in old weapons.

Lab spokesman Jim Danneskiold said currently there is no timetable for when the Advanced Hydrotest Facility would be built.

"Right now, it's entirely conceptual," he said. "There are no construction plans."

The new facility would be a much more advanced version of the Dual-Axis Radiographic Hydrodynamic Test Facility, a $260 million building at the lab that's also used to test simulations of nuclear explosions.

The Comprehensive Site Plan also mentions building tunnels leading to and from the Advanced Hydrotest Facility area to transport nuclear materials and radioactive beams coming from the accelerator at a nearby area.

Although construction plans are still years away, the Comprehensive Site Plan indicates that the core area for the hydrotest facility would be just east of Technical Area 5, on the eastern side of the lab near San Ildefonso Pueblo property.

Los Alamos Study Group research contributed to this article.

Fire and Water

Flood May Spread Radioactivity in Los Alamos

Standing above Pajarito Canyon on the grounds of the Los Alamos National Laboratory, Rep. Tom Udall, D-N.M., right, talks about the Army Corps of Engineers' plans to build a dam in the canyon to prevent flooding. (Jake Schoellkopf/AP Photo)

By Sascha Segan
ABCNEWS.com

July 10 — Fifty-seven years of nuclear waste may soon come back to haunt the people of Los Alamos, N.M.

After wildfires denuded the countryside around the labs, flash floods now threaten to wash radioactive dirt buried as early as 1943 into the Rio Grande river and nearby Indian lands, activists said.

Runoff from the Los Alamos labs could reach the Rio Grande river or a nearby Indian reservation. (ABCNEWS.com/ Magellan Geographix)

"This is one of the more serious nuclear emergencies to occur in the U.S.," said Robert Alvarez of Concerned Citizens for Nuclear Safety, a local watchdog group which held an unprecedented joint meeting with lab officials this weekend to discuss the issue.

Congressman Tom Udall, R-N.M., said an unexpected heavy rainfall could cause

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- Los Alamos lab site
- Concerned Citizens
- Los Alamos Study Group

trouble. The New Mexico monsoon season started July 4.

"If there are large storms beyond the normal, we could have some serious contamination problems. That's what they're working on right now," he said.

Dam It

The controlled brushfire started on May 4 and went wild, eventually scorching 47,000 acres, including 8,000 on lab property.

Lab officials say they're taking action to slow flood runoff on the ash-covered ground, reseeding grass, putting up log barriers and building a 50-foot-high concrete dam in one canyon. They say the radioactive waste isn't dangerous, but that they don't want it flooding off the lab site.

"It's just not a good thing to do from a good-neighbor standpoint," said Lee McAtee, the lab's deputy division director for environmental safety and health.

The lab has started trucking contaminated dirt out of one canyon, but McAtee says tearing up all the waste sites would do more damage than it would fix.

"You ravage the environment by going into a canyon bottom with big dump trucks and bulldozers," he said.

Though the lab currently must abide by environmental regulations, McAtee said, that wasn't the case from Los Alamos' founding in 1943 through the early 1960s, before the regulations were enacted. Los Alamos was the home of the Manhattan Project, which built the bomb used at Hiroshima in World War II.

Watchdogs said the lab is still laying down waste that some scientists consider radioactive, but that is under the legal limit for harmlessness.

Greg Mello, who was New Mexico's lead hazardous waste inspector in 1984 and now heads the Santa Fe-based Los Alamos Study Group, said the lab is taking the wrong approach, and is acting without strong oversight. The waste at Los Alamos needs permanent stone caps on mesas full of waste, he said, and grass and bushes would provide better runoff control than a

dam.

The waste "should definitely be stabilized for the ages, which the lab has no plans to do," he said.

Keep Talking

This weekend's meeting was an unusual show of good faith between lab officials and activists who have traditionally mistrusted each other, both sides said.

"The lab has operated under conditions of secrecy, isolation and privilege for 57 years, and the lab for the first time not only came out but publicly admitted that its conduct with the public has not been one that engenders trust," Alvarez said.

Los Alamos' McAtee said the lab is finally trying to work with, not against, local citizens' groups.

"We can do a lot more working together... hopefully this is a small step in the right direction," he said. ■

removed from the building."

According to the report, "these situations occurred because Rocky Flats did not require the contractor to maintain an accurate inventory record detailing the quantities, types, serial numbers, and locations of its weapons parts." "Further, some contractor performance measures focused on cleanup at the expense of proper disposal practices," the report said.

Under the Federal Acquisition Regulation, a contractor is responsible and accountable for all government-owned property it accepts and must provide a complete record of all transactions, the IG said.

Rocky Flats management has not conducted an inventory of weapons parts since 1995 because it believed the cost of doing so "was not commensurate with the benefits to be derived," the report said.

The IG also found that Kaiser-Hill could not accurately report the value of the weapons inventory at the site on its financial statements. When the contractor took over at the site, the value of the weapons inventory was reported to be $70 million. Later, the value was reduced to $59 million and then to $25 million. "However, all of these figures were unsupported because inventory records were not maintained," the report concluded.

The report is available at http://www.ig.doe.gov.

National Security

LANL LAUNCHES SECURITY PROGRAM; WATCHDOG DOUBTS IT WILL SUCCEED

In an attempt to heighten Los Alamos National Laboratory employees' consideration of security, officials last week announced an Integrated Security and Safeguards Management program. The announcement drew quick condemnation from a New Mexico watchdog group, which said the program will barely change attitudes toward security among LANL scientists.

LANL Director John Browne said in a memo to employees that the program is modeled after DOE's Integrated Safety Management program. DOE implemented ISM in 1998 to identify potential safety problems early in facility operations.

In a July 3 memo to staff, Browne said the new security program was prompted by concerns over a recent discovery that two computer disk drives containing classified information were missing from a vault at the lab. Although the drives were later recovered, the lapse caused general outrage in Congress and led to calls for stricter security polices.

"I am directing all managers to participate in mandatory security awareness training; to review their security responsibilities with their supervisor (including the review and updating of performance objectives); and to address findings from internal self assessments and make appropriate improvements," Browne said in describing the new initiative.

Those efforts will be monitored by the lab, Browne said. Under the new program, safety and security management will be incorporated into all lab activities, performance assessments and improvement programs. The extent to which the program will apply to a particular employee will depend on the type of work and classified data, if any, that is involved.

"I know I can count on your cooperation and support during this difficult period," Browne said. "The nation expects excellence in science and security from [LANL], and we can do no less."

But Greg Mello, director of Los Alamos Study Group, Santa Fe, N.M., was skeptical about the lab's security plan. In an interview Wednesday, Mello said the new program offers merely a temporary solution to a long-standing problem. "There needs to be a fairly tough security ogre who is a federal employee" at each weapons lab, he said.

Mello believes that having University of California employees monitor security at LANL is like having the fox guarding the hen house. UC operates the lab for DOE. "This is a lot like asking Moe to solve the problems of Larry and Curly," he said, recalling the comedy team, the Three Stooges.

Mello also criticized Browne for statements stressing the need for balance between research and security. "You can't expect to have an academic setting in a [nuclear] bomb factory," Mello said. "Every effort has been made by LANL management to cultivate an air of confusion," he added.

Mello maintained that LANL's enforcement of security regulations has been lax and is unlikely to change. "They don't want to have an intrusive security system that affects scientists' morale," he said.

In Washington, a Senate aide welcomed the new LANL initiative. "This program may help allay some concerns in Congress, so it's a step in the right direction," the aide said. "But [LANL] has a long way to go in restoring credibility with Congress."

In another memo, also issued Monday, Browne alerted employees to a recent directive by Energy

Secretary Bill Richardson directing the lab to hire outside help to bolster security (*IE/FL*, 3 July, 1). "Vigilance must be our watchword," Browne said. "The failure of just one individual to be attentive or to follow safety or security procedures can have ramifications for the entire institution."

Browne said LANL will attract increasing attention to its security. "We must work to regain [the public's] trust and reaffirm that we are worthy guardians of our nation's most valued secrets," he said. "The metric will be our performance, not our words." — *Tarun Reddy*

QUESTIONS SURFACE OVER DOE'S ATTEMPT TO STRENGTHEN SECURITY AT LABS

DOE observers last week questioned the effectiveness of the department's recent decision to amend the University of California's management and operating contract at three national laboratories in an effort to improve security.

Energy Secretary Bill Richardson announced June 30 that DOE would reopen the contract to bring in new security and management personnel (*IE/FL*, 3 July, 1). The contract with UC, which manages Lawrence Livermore, Los Alamos and Lawrence Berkeley national laboratories, was signed in 1997 and expires in 2002.

Marylia Kelley, executive director of Tri Valley Communities Against a Radioactive Environment, Livermore, Calif., said in an interview Thursday that reopening the contract is unlikely to prompt improvements in security at the labs. "I'm not sure if this a just another tempest in a teapot," Kelley said.

Kelley said the problems facing UC are related more to the lab management than the actual incidents that raised the ire of Congress. LANL and UC have come under criticism most recently for the disappearance of two computer hard drives containing classified nuclear weapons data. That incident came more than a year after former LANL scientist Wen Ho Lee was fired for failing to cooperate with an espionage investigation.

Kelley also cited the National Ignition Facility as a program that lacks accountability. LLNL and UC last year revealed that NIF, a laser program that will allow scientists to simulate the behavior of nuclear weapons, was over budget and behind schedule. "There are too many cases where the managers who are responsible for these programs are never asked to testify before Congress. As a result, the lab is never held accountable for its actions," she said.

Kelley was not the only person skeptical about the impact of DOE's action. Steven Aftergood, who heads the Project on Government Secrecy for the Federation of American Scientists, said in an interview that Richardson's announcement "was a very cosmetic gesture."

Aftergood said the reactions by DOE and Congress are unfortunate because they represent a "predictable rush to scapegoating." He explained that officials still do not know how the LANL disk drives disappeared, and should delay action until the case is solved. "It's disheartening to see this sort of bloodlust in Congress," he said.

Rep. Ellen Tauscher, a California Democrat whose district includes LLNL and part of Sandia National Laboratories, said in a statement that she welcomed Richardson's efforts to improve security at the labs. But his action, she added, "does not mitigate the fact that the recent security breaches at [LANL] happened because DOE did not have the right security policies in place."

"The more important challenge that the department faces is rewriting the security code so that the contractor in charge of security has the right policies to implement," Tauscher said.

UC President Richard Atkinson said in a statement that officials were pleased with Richardson's decision. "I am confident, that, working together, DOE and the University will succeed," he said.

— *Tarun Reddy*

GOVERNMENT LISTS COUNTRIES FORMER LANL SCIENTIST MAY HAVE AIDED

Federal prosecutors in the case of Wen Ho Lee last week claimed that the former Los Alamos National Laboratory scientist's decision to seek employment in other nations, including France and Australia, posed a risk to national security, because he could have given those countries nuclear weapons data from LANL computers.

Norman Bay, a U.S. attorney who is participating in the government's prosecution of the case, made the claim in a "bill of particulars" filed Wednesday in U.S. District Court in Albuquerque, N.M. Lee has been jailed since December on 59 counts of mishandling classified information while working as a physicist at LANL. Lee has denied the charges.

Lee's attorneys have argued that he should not be prosecuted because the information was downloaded from lab computers so that he could work at home, not help other nations learn U.S. secrets. They have also argued that prosecutors must prove that he tried to help a specific nation by giving them classified data.

"In 1993, or at about the time of the first offenses charged, the defendant addressed letters seeking

Lab Chemical Found in Water

Level Isn't a Danger To Public, State Says

By Ian Hoffman
Journal Staff Writer

7/21/00
A5

For the first time ever, the federal nuclear-weapons lab in Los Alamos has admitted to finding one of its chemicals in a drinking-water well.

Known as perchlorate, the chemical cropped up in a Pueblo Canyon well at extremely low levels — two to three parts per billion — that aren't thought to endanger human health, according to independent scientists. The well is one of seven supplying 12,000 people.

"At these levels, I have not found any evidence of adverse health effects," said Ron Voorhees, New Mexico's deputy state epidemiologist.

"This is not anything that poses any danger to the public," said Tim Glasco, deputy utilities manager for Los Alamos County. "Your water is safe to drink."

Yet the fact that perchlorate was found at all in a drinking-water well is remarkable and could be a warning sign of vast contamination slowly moving into Los Alamos County's water supply, according to state and private water scientists.

To date, the U.S. Department of Energy has ruled out any ground-water cleanup at its Los Alamos National Laboratory. The perchlorate finding, coming on top of other contamination in Los Alamos' water-supply aquifer, makes such a cleanup more and more likely.

Perchlorate is a nonradioactive chemical more commonly found where aerospace and defense contractors make rocket engines. It also has been a staple of nuclear research at Los Alamos National Laboratory since the Manhattan Project.

In the 1940s and '50s, scientists at the now-defunct Technical Area 45 used the chemical in analyses of plutonium and other radioactive metals, then flushed the remains untreated into Acid Canyon.

Lab scientists suspect the perchlorate found in late June and early July was released a half century ago from Technical Area 45. If so, the chemical has seeped eastward more than three miles and trickled downward through 1,000 feet of rock, mixing with several underground bodies

See **LAB** *on* **PAGE 3**

Lab Chemical Found in Water Well

from **PAGE 1**

of water. Water scientists found it in a deep and powerful well that draws on a quarter-mile thick swath of soggy rock, an underground reservoir for unknown billions of gallons of water.

Any toxin to travel that far and survive huge amounts of dilution could be a clue that heavier concentrations — and perhaps more dangerous contaminants — could end up in Los Alamos County's water.

In January, state water scientists reported finding a low but undeniable level of radioactive tritium in Otowi-1, the same drinking-water well where the perchlorate was found. They also found another radioactive element, strontium-90, in a second well.

"It is clear that a highly contaminated band of water is present in the upper portions of these two wells because they are very deep, and there is a great deal of dilution," said Greg Mello, a hydrologist who leads the Los Alamos Study Group, a nonprofit nuclear disarmament group in Santa Fe. "It is logical to assume the perchlorate is a harbinger for other things."

Los Alamos lab scientists plan to test all surface and ground waters for the chemical, plus drill new test wells. Getting a grip on the extent and levels of contamination will take years, said Dave Rogers, a lab hydrologist.

Mello argues that is a mistake.

"The answer is not to study the deep aquifer in detail but to act, to remediate the shallow aquifer" that is the easiest-to-reach source of contamination, he said. "The answer is prevention, not scientific hand-wringing after the fact. Los Alamos should be using its cleanup budget to clean up."

Ammonium perchlorate is a main ingredient in matches, solid rocket fuel and fireworks and has been found in the water supplies for 15 million people in the United States, primarily near rocket-engine factories and testing sites in California, Nevada and Utah.

Given to rats at doses 100 to 1,000 times greater than those in Los Alamos' drinking water, perchlorate causes changes in the thyroid gland that can dampen production of hormones needed for metabolism and development.

Effects on humans still are being studied, but scientists worry about perchlorate because doctors used to use the chemical to treat overactive thyroids. As a result, the U.S. Environmental Protection Agency declared perchlorate a "contaminant of concern" in 1998 and is performing research to set its own health advisory level.

The chemical has been dumped in five Los Alamos canyons over time. Today, the lab flushes liquid waste containing perchlorate into Mortandad Canyon at levels up to 66 parts per billion. That is almost four times the "health advisory" level of 18 ppb at which California regulators advise water systems to shut down. New Mexico has no standard or advisory level for perchlorate.

The lab is testing all Los Alamos drinking-water wells quarterly to see whether the concentrations go up or down. Los Alamos' Glasco said the county probably won't use any well showing levels above 18 ppb.

For now, said Voorhees of the New Mexico Department of Health, "the levels in the Los Alamos drinking water are much less than the (California) current action level ... Once it gets diluted (in the Los Alamos water system), it goes down proportionally. So I don't think the levels in Los Alamos are of health concern at this time."

State environmental regulators are keeping an eye on perchlorate in Los Alamos' water. "It's not a health issue, though it's something we're very concerned about and are following," said Bill Bartels, acting drinking-water chief for the New Mexico Environment Department.

Some state officials are thinking about proposing a water standard for perchlorate. An aquifer underneath a "burn pit" at White Sands Missile Range shows perchlorate at 25,000 ppb, and the chemical has turned up at lesser concentrations near defense sites elsewhere in the state. But state law allows regulators to step in despite the lack of a water-quality standard if they feel human health or water supplies are at risk.

"This is a time when the regulatory screw apparently needs to be tightened," Mello said. "The answer, instead, is real enforcement by our state regulatory authorities who have been unwilling to use their ample powers under law."

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Lab Chemical Found in Water

Ian Hoffman Journal Staff Writer

Level Isn't a Danger To Public, State Says

For the first time ever, the federal nuclear-weapons lab in Los Alamos has admitted to finding one of its chemicals in a drinking-water well.

Known as perchlorate, the chemical cropped up in a Pueblo Canyon well at extremely low levels two to three parts per billion that aren't thought to endanger human health, according to independent scientists. The well is one of seven supplying 12,000 people.

"At these levels, I have not found any evidence of adverse health effects," said Ron Voorhees, New Mexico's deputy state epidemiologist.

"This is not anything that poses any danger to the public," said Tim Glasco, deputy utilities manager for Los Alamos County. "Your water is safe to drink."

Yet the fact that perchlorate was found at all in a drinking-water well is remarkable and could be a warning sign of vast contamination slowly moving into Los Alamos County's water supply, according to state and private water scientists.

To date, the U.S. Department of Energy has ruled out any ground-water cleanup at its Los Alamos National Laboratory. The perchlorate finding, coming on top of other contamination in Los Alamos' water-supply aquifer, makes such a cleanup more and more likely.

Perchlorate is a nonradioactive chemical more commonly found where aerospace and defense contractors make rocket engines. It also has been a staple of nuclear research at Los Alamos National Laboratory since the Manhattan Project.

In the 1940s and '50s, scientists at the now-defunct Technical Area 45 used the chemical in analyses of plutonium and other radioactive metals, then flushed the remains untreated into Acid Canyon.

Lab scientists suspect the perchlorate found in late June and early July was released a half century ago from Technical Area 45. If so, the chemical has seeped eastward more than three miles and trickled downward through 1,000 feet of rock, mixing with several underground bodies of water. Water scientists found it in a deep and powerful well that draws on a quarter-mile thick swath of soggy rock, an underground reservoir for unknown billions of gallons of water.

Any toxin to travel that far and survive huge amounts of dilution could be a clue that heavier concentrations and perhaps more dangerous contaminants could end up in Los Alamos County's

water.

In January, state water scientists reported finding a low but undeniable level of radioactive tritium in Otowi-1, the same drinking-water well where the perchlorate was found. They also found another radioactive element, strontium-90, in a second well.

"It is clear that a highly contaminated band of water is present in the upper portions of these two wells because they are very deep, and there is a great deal of dilution," said Greg Mello, a hydrologist who leads the Los Alamos Study Group, a nonprofit nuclear disarmament group in Santa Fe. "It is logical to assume the perchlorate is a harbinger for other things."

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or water supplies are at risk.

"This is a time when the regulatory screw apparently needs to be tightened," Mello said. "The answer, instead, is real enforcement by our state regulatory authorities who have been unwilling to use their ample powers under law."

Who else could do a better job of running the lab?

7/23/00

By KRISTEN DAVENPORT
The New Mexican

Almost no one thinks Los Alamos National Laboratory will move out of University of California hands anytime soon.

But the last time the lab's contract with UC was up for renewal — in 1997 — a handful of people in Congress introduced bills that would have given oversight of the laboratories to the Pentagon.

And that is what most anti-nuclear activists would like — giving responsibility for nuclear warheads to the people who run the wars.

"We'd like to see the weapons scientists wear military uniforms," said Greg Mello of the Los Alamos Study Group, a lab watchdog and anti-nuclear organization.

Many people within and outside Los Alamos are hoping the recent troubles up on the Hill and questions over management could mean exactly the kind of major change they've been wanting for a long time.

Critics for years have blamed UC and the Department of Energy for not exercising enough control over the lab — making sure waste dumps are cleaned up, workers are safe and secrets are securely under lock.

The General Accounting Office, the investigative arm of Congress, has cited the DOE and the university dozens of times in just the last decade for security and safety mishaps. Internal and external audits have revealed problems for years.

Others have suggested that the laboratory's management contract be put up for bid — thereby possibly giving control to a private company or a university such as The University of New Mexico or the University of Texas, two that have been mentioned as possible contractors.

Some suggested private contractors include Allied Signal, which runs the DOE's Kansas City laboratory, and Lockheed Martin, which is under DOE contract to run Sandia National Laboratories in Albuquerque.

"As a class, a private defense contractor might make more sense," Mello said. "Switching to another rogue (government) contractor is not going to solve the DOE's problem.

"There is no question Sandia is a better-managed laboratory than LANL. Sandia's mission is no more comfortable for us (as anti-nuclear activists), but Sandia's goals are at least coherent."

For example, almost all work at Sandia involves weapons design, while at LANL many other types of scientific research are being conducted.

Santa Fe attorney Ruth Timberlake-Prokop performed a study for the Los Alamos Study Group of the government's contract with UC several years ago and said she found that the current contract basically lets everyone "off the hook" — and lets the lab do what it wants.

Lab spokesman Jim Danneskiold denies that the lab hasn't had enough oversight from outside organizations.

"The lab has always been under intense oversight from the Department of Energy and from Congress," Danneskiold said. "Certainly the current events have intensified that scrutiny."

And there are people who think the new National Nuclear Security Administration will settle the issue and get rid of the DOE instead of the university.

Sen. Pete Domenici, R-N.M., said the lab is under too much scrutiny from the DOE — mainly because the Energy Department can't keep its rules straight.

"The DOE's myriad of conflicting bureaucracies and rules" don't work to oversee the lab, Domenici said. "They don't let the (lab) managers manage it."

Anti-nuclear activists rally at lab 8/10/00

Clyde Mueller/The New Mexican

Gene Tucker, Los Alamos National Laboratory's deputy director for security, far right wearing a suit, watches as two protesters dash across the lab's 'No Trespassing' line. The two were part of about 300 people participating in a rally for peace in observance of the 55th anniversary of the dropping of the atomic bomb on Nagasaki, Japan.

Nobody arrested at quiet bombing protest at LANL

By KRISTEN DAVENPORT
The New Mexican

Amid dancing devils, giant Medusa puppets and constant rhythmic drumming, about 300 protesters walked almost two miles to Los Alamos National Laboratory to rally against nuclear weapons Wednesday.

Protesters chanted "Shut it down, shut it down," and other slogans condemning the lab's work with nukes and calling for nuclear disarmament.

Once the rally reached lab property, Los Alamos officials had set up a yellow-rope line in a parking lot that protesters crossed to be "arrested." No one was actually arrested and none will be prosecuted, although 60 people crossed the line and were detained in a LANL bus before being driven back to Ashley Pond where the protest started.

The anti-nuclear rally was the second large peace protest in Los Alamos in recent years. Last year, about 450 people came to the rally and 73 activists — including actor Martin Sheen — were detained on the lab arrest bus.

Sheen, who now is the star of NBC's hit TV show *West Wing*, had told organizers he would attend this year's rally. But he never showed.

Instead, actor Wes Studi, a Cherokee who has had roles in movies such as *The Last of the Mohicans*, gave a brief speech and crossed the line with other protesters before being detained.

"There's no such thing as a smart bomb," Studi told the crowd. "If we're smart enough to build nuclear bombs, we should be smart enough to undo them."

Although the protest this year was a bit smaller than last year, one lab official said this year's rally was a bit "rowdier."

About as many LANL employees as there were protesters stood on the opposite side of the yellow rope, many watching the protest through binoculars from the lab administration building's balconies.

Some stood not far from the protesters and exchanged a few insults with those chanting.

"Give up your yuppie lifestyle," said one female protester, who wore a devilish mask for much of the march on the lab. "You are addicted to your minivans."

She also pointed at one man and said "You, the fat guy in the black shirt, you're a wage slave for war."

Not all Los Alamos residents were welcoming. On the walk back to Ashley Pond, several people yelled "Go home" to protesters as they drove by.

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

RALLY

Continued from Page B-1

Two young men in a white convertible honked and made obscene gestures at people walking down Trinity Drive.

Also, a group of kids stood by as protesters marched away with a big sign proclaiming "Why we love Los Alamos" including "Because it is a safe place."

"You're not safe here," one woman shouted at the kids.

"You must die!" a boy yelled back, before an adult told him to be respectful.

But for the most part, organizers said, the protest went well — and peacefully.

Takeshi Tanemori, a survivor of the bombing of Hiroshima, talked about his experience forgiving Americans for the atomic bomb dropped on his town when he was 8 years old.

"I am not here to blame or accuse or point fingers that Los Alamos is full of evil people," Tanemori said. "I'm here to plead with you that it's time for reconciliation."

"Please tell me why we continue to make bombs ... in the name of making peace," he said.

The rally was staged on the 55th anniversary of the bombing of Nagasaki on Aug. 9, 1945. The Nagasaki bomb — built by scientists at Los Alamos — was dropped three days after the United States dropped the first nuclear weapon in history on Hiroshima.

Japan surrendered about a week later.

Those at the rally said 55 years is too long for one town to be building weapons of mass destruction and suggest that the lab be changed to peaceful missions — like ice-cream research.

Clyde Mueller/The New Mexican

Anti-nuclear activist and actor Wes Studi of Santa Fe was the second person to cross the lab's 'No Trespassing' line. Studi was escorted to a detention bus by lab security. Protesters who crossed the line were detained for about an hour before being driven back to their cars.

"We felt like this issue needed some humor and art," said Aysha Massell, who along with Nik Bertulis has started a new peace group in Santa Fe that promotes disarmament through funny slogans.

Both were wearing blue lab coats that said "Los Alamos Ice Cream Research Group" as they passed out pictures of Uncle Sam saying "I want YOU to make nukes."

"People don't realize Los Alamos is still in the business of making nuclear bombs," Massell said.

abc

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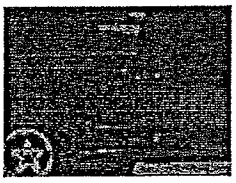
Federal probe of

NIF costs sought



GAO audit suggests Congress was misled

By Lisa Friedman
WASHINGTON BUREAU

WASHINGTON -- Nuclear watchdog groups, incensed by a federal audit that shows managers of the National Ignition Facility at Lawrence Livermore Laboratory turned a blind eye to massive cost overruns, called Monday for criminal investigations.

The General Accounting Office audit, which will be released Thursday, suggests the people charged with making sure the world's largest laser gets built misled Congress about the price tag from the very beginning. And, investigators said, they systematically ignored evidence that NIF has had serious problems ever since.

The report concludes that the laser, which originally was to cost $1.2 billion, will really cost about $4 billion. Even then, it may not perform to original standards.

"There is a clear pattern of deceit, fraud and abuse. There should be a criminal investigation," said Marylia Kelley, director of Tri-Valley Cares.

Added Greg Mello, director of the Los Alamos Study Group, "This is a conspiracy to defraud the federal government by the University of California."

Department of Energy spokeswoman Lisa Cutler did not return a phone call seeking comment. Members of Congress also continued to decline comment Monday.

Lab officials have disagreed with the GAO report's project cost estimates, which include costs for the research and development of the BB-size laser targets that will be blasted by NIF's planned 192 laser beams.

And the technical problems are a thing of the past, said Susan Houghton, a lab spokeswoman.

"Yes, we recognize that there were problems. They're behind us," she said.

DOE, despite widespread and growing criticism, continues to call the laser project the "cornerstone" of the nation's Science-Based Stockpile Stewardship and Maintenance Program. The stewardship program aims to use supercomputers and massive nuclear-bomb simulation machines to maintain the reliability, safety and security of the nation's nuclear weapons.

Even facility proponents concede the project is billions of dollars over its authorized budget of $1.2 billion and years behind schedule.

The GAO report confirms a previous analysis that found NIF was poorly managed at Livermore. But it also concludes that the lab's former laser director "assured laboratory managers, DOE, the university (of California which manages Livermore and Los Alamos), and the Congress" that NIF was adequately funded, on budget and on time, "even while he was briefed on clear and growing evidence that NIF had serious problems."

Scientists and officials at the other two nuclear-weapons labs have expressed concerns that funding the project will shrink their budgets and could threaten the entire national effort to maintain the nuclear arsenal.

This summer Richardson blasted Sandia and its officials when they publicly expressed reservations about the facility.

"This report is terribly damaging," said Greg Mello, a physicist and weapons-lab watchdog analyst with the Santa Fe-based **Los Alamos Study Group**, which opposes NIF.

"This is conspiracy to defraud the federal government," he said. "It's time to look at calling in a (federal) grand jury."

At the Natural Resources Defense Council in Washington, D.C., nuclear-weapons program analyst Christopher Paine said the report "is grounds for a criminal investigation" because it suggests that Livermore officials filed false reports with the government to maintain a flow of funds to begin construction and build the laser in spite of its major technical problems.

Houghton dismissed the calls for a criminal inquiry as part of the anti-nuclear organizations' agenda, and she insisted that after "85 days of review" NIF is back on track with no "technical showstoppers."

Author: Lawrence Spohn lspohn@abqtrib.com / 823-3611
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LOS ALAMOS FINDS LOCAL FARM PRODUCE NOT CONTAMINATED BY WILDFIRE

A May wildfire at Los Alamos National Laboratory does not threaten the produce of farmers located downwind of the New Mexico facility, a lab official said last week.

Phil Fresquez, an official with the lab's Ecology Group said in an interview Wednesday that preliminary analysis of soil samples taken from farms located between 20 and 30 miles away showed no significant amounts of contaminants were deposited by smoke and ash. "We hope to have final results within the next two weeks," he said.

Working with the New Mexico Environment Dept., LANL scientists collected soil samples in mid-June at the request of the Santa Fe Farmers' Market Task Force. "There is no increased health risk to the public as a result of the fires," Fresquez said.

The group had requested that samples be taken downwind of the lab because these areas received the most amount of smoke and ash from the fires, he said. Samples have already been taken at farms upwind of the lab and did not show any abnormal readings.

The lab sampled for a variety of radionuclides including strontium-90, tritium, cesium-137, uranium and three isotopes of plutonium. "We selected these elements because these are the ones people generally worry about when a fire occurs," he said.

Lab and NMED officials tested for elevated levels of these substances at ground-level and up to two inches below the surface. While some environmental groups have claimed that DOE labs should monitor at deeper levels below the surface, Fresquez defended the lab's approach. "Our approach represents the best way to test for the spread of radionuclides because they do not migrate beyond the two-inch range."

In addition, Fresquez pointed out that metal concentrations around the lab's perimeter, which was much closer to the fires than the farms were, experienced no changes in their contamination levels.

LANL, Fresquez said, wanted to address residents' concerns about radionuclides possibly migrating from soil into locally-grown produce. To accomplish that goal, the lab collected 50 samples of fruits and vegetables that are currently being analyzed. "We have collected produce that [ripened] at various times after the fire to get a good cross section of data."

While officials expect to have monitoring data on the produce within two months, Fresquez expressed confidence that the results would match those from the soil analysis. "There is very little uptake of soil in plants so we're not really worried," he said.

The monitoring undertaken by the lab because of the fire caused Fresquez's group to double its budget to $400,000. But he said the expenditure was well worth it. "The Cerro Grande fire is arguably the most well-monitored event in the lab's history," he said.

At least one watchdog group was unimpressed with the lab's results. Greg Mello, director of the Los Alamos Study Group, said in an interview Thursday that having lab officials tout the minimal impact of the fire misses a much larger issue regarding the environmental and health impacts of LANL research. "Let's talk about the real dangers of nuclear weapons and not try to minimize their impact through analyses like this one," he said.

LANL will post monitoring updates on its website at http://www.esh.lanl.gov/esh/envireports/html.

— Tarun Reddy

Lab to take waste from other sites

▶ *Los Alamos will temporarily store radioactive waste from private industries*

By KRISTEN DAVENPORT
The New Mexican

8/26/00 SNM

Truckloads of radioactive waste from private industries will be arriving at Los Alamos National Laboratory to be temporarily stored above ground for years at Area G.

This would apparently be the first time the lab has accepted large amounts of radioactive waste to store from private sources, although almost 60,000 drums of contaminated material from the nation's weapons work already sit above ground under tents at Area G, the lab's Technical Area 54. Much of the weapons waste is destined for WIPP.

The proposal to store outside "sealed sources" containing plutonium, beryllium and americium passed an environmental hurdle this week, the Department of Energy announced.

The 30,000 curies of radioactive waste would be temporarily stored in above-ground drums while the Department of Energy decides what to do with it — reprocess and treat it or send it to someplace that accepts high-level waste such as Yucca Mountain in Nevada.

Some lab-watchdog groups warn that by allowing the waste onto LANL property even temporarily, the state risks having it permanently buried here.

Please see **LAB**, Page A-4

LAB

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"This is really just turning Area G into a WIPP site," said Greg Mello of the Los Alamos Study Group. "This is a lot of plutonium to bury there."

Much of the outside contaminated material cannot be sent to WIPP because it comes from nondefense sources, and the law does not allow defense waste to be mixed in storage with waste from other civilian industry.

Sealed sources are stainless-steel containers with nuclear materials inside — largely from university laboratories or private industries. The 21,000 sources will be stored in about 1,000 drums, most of which will be put on the mesa top in LANL.

Many of the 21,000 sealed sources in existence in the United States come from devices for drilling oil and gas. Gauges used by research organizations to measure soil moisture and content also contain radioactive chemicals. Qualified public and private organizations have been allowed to use nuclear materials for some activities since 1954.

Several years ago, the federal government ordered the Department of Energy to round up the estimated 21,000 radioactive sources because they could pose a threat to public health if they were accidentally opened.

The sources have periodically been found abandoned in warehouses and trucks across the country in recent years, leading some anti-nuclear activists to worry that a rogue nation or terrorist could collect the devices and instruments to eventually build a bomb.

But just the same, they say, the waste should not be sent to New Mexico for storage.

"Why is New Mexico the target of yet another kind of nuclear waste?" Mello asked. "Why is this the natural place to accumulate waste? Why are we the target? We seem to be Ground Zero for the nation's waste."

But John Themelis, acting assistant manager for environmental operations at DOE in Albuquerque, said that Los Alamos is only a temporary storage spot for the radioactive waste and that it will be sent somewhere else.

A supplemental analysis for the Site-Wide Environmental Impact Statement for Los Alamos states that waste storage would be "on an interim basis until a strategy is developed for final disposition of the sources," a DOE letter released this week states.

"We have no intention of disposing of it (permanently) at Los Alamos," Themelis said. "I don't see any chance of that."

Themelis said it's important for the DOE to gather the dispersed radioactive sources quickly because similar devices in other countries have killed people when they were accidentally opened.

And "this is just a small amount of waste compared to what is already there (at Area G)."

The lab has been accepting small amounts of nondefense waste since 1979 — about 1,100 of the radioactive devicessources or drums? have already been sent to the site. However, in 1995, DOE was asked to come up with a comprehensive plan to gather the remaining 21,000 sources.

Themelis said the DOE hopes to have all the sealed sources gathered by 2006. They will be separated, and the federal government will then figure out what to do with them.

The Cerro Grande fire in May burned within a half-mile of Area G, where the current waste sits in drums under a large tent. The fire caused lab officials and activists alike to say that the waste sitting on the top of the mesa would be better off in the underground salt chambers of WIPP.

"At the same time they're making a big deal about accelerating sending that stuff to WIPP, they're doing the opposite here," said Don Hancock, director of the nuclear-safety program at the Southwestern Research and Information Center in Albuquerque.

Hancock said he also opposes storing the sealed radioactive sources at LANL because "the DOE doesn't have a good record of handling its own waste."

"In fact, commercial industry has a better safety record. So the industry that handles it better sends to stuff to DOE — this is not a plus for the health and security (of the public)."

Radioactive Relics May Head to LANL

8/26/00

■ *Sealed canisters from the 1950s and '60s could end up at the lab for recycling or storage*

Journal Staff Report

The go-go years of atomic energy scattered tens of thousands of sealed radioactive canisters all over the United States, in factories, research labs, schools and elsewhere.

Now these relics of the 1950s and '60s are largely outmoded, unwanted and in some cases carelessly abandoned. And the U.S. Department of Energy intends to bring them to Los Alamos National Laboratory in roughly 1,000 shielded barrels, according to a new DOE environmental study.

Some of these sealed radioactive sources would be cracked open and the metals inside — such as plutonium — would be purified with acid and recycled. Los Alamos lab is one of the few places in the nation where such extensive radiochemistry can be done under the kind of security warranted by canisters that can contain weapons-grade plutonium.

Under the DOE's plan, the likely minority of sealed sources used for military purposes would be sent for burial to the Waste Isolation Pilot Plant, near Carlsbad.

Most of the rest would be stored temporarily at the lab's radioactive waste dump at Technical Area 54 or at the Chemistry and Metallurgy Research building. The 48-year-old building is underlain by an earthquake fault and slated for abandonment in 10 years or so.

The DOE's study suggests the sealed sources and related wastes that don't go to WIPP could remain at Los Alamos indefinitely. And that idea rests uneasily with lab watchdogs such as Greg Mello of the Los Alamos Study Group in Santa Fe, which is studying the proposal.

Mello suggests the DOE is classifying the unwanted sources as "material" rather than "wastes" in order to evade environmental regulations for waste disposal. But just as worrisome is the absence of a defined fate for the sources, he said.

"Why move waste around if you don't know what you're going to do with it?" Mello asked.

Instead, he said, the DOE should look at fully processing and disposing of the wastes in approved disposal sites, leaving them in private storage areas until a plan for final disposition is decided or storing them in a secure facility, such as the Manzano Mountains nuclear-weapons storage tunnels outside Albuquerque.

Another nuke-waste dump near Carlsbad?

▶ *Proposed facility would bury radioactive industrial waste much shallower than WIPP does* 9/2/00

By KRISTEN DAVENPORT
The New Mexican

A private company is proposing another nuclear-waste dump for New Mexico near WIPP.

The proposed dump would accept what WIPP and other nuclear dumps cannot: highly radioactive waste from private industry.

WIPP can only accept waste from military activities — mostly nuclear-weapons work. And the proposal calls for a dump that would accept Greater Than Class C (GTCC) waste — commercial waste that is often highly radioactive.

There is no facility licensed in the United States for permanent disposal of GTCC waste. The only proposed site for such waste is at Yucca Mountain in Nevada, scheduled to open in 2010 despite adamant opposition from Nevada citizens.

The idea for a new dump somewhere near Carlsbad is extremely informal, New Mexico Environment Department officials say, and no official proposal has been made to either the Department of Energy or the Environment Department.

However, documents from the DOE show that it tentatively supports the idea of a private contractor burying radioactive materials "on land in the vicinity of the WIPP site" about 150 to 200 feet below the ground in boreholes — about 1,800 feet shallower than the WIPP waste.

"The basic proposal ... is reasonable," wrote Robert Campbell, who works in DOE's environmental-management bureau in Washington. "The department should support the concept of (private) companies applying for and receiving licenses to dispose of this waste."

The nuclear waste in question is mostly from what are called "sealed sources" containing plutonium, beryllium and americium from private industries. The sources are scattered throughout the United States, many of them abandoned in old warehouses or other areas.

Sealed sources are stainless-steel containers with nuclear materials inside. Most come from devices used for drilling for oil and gas, such as

NUCLEAR

Continued from Page A-1

gauges used by oil companies and others to measure soil moisture and composition.

Several years ago, the federal government ordered the DOE to gather the sealed sources and dispose of them in a safe place, fearing that plutonium and other radioactive chemicals strewn about the United States was a safety hazard. In other countries, people have been killed when they accidentally opened a device containing the materials.

Last week, the DOE announced that the sealed sources would be at least temporarily stored at Area G — or possibly other areas — at Los Alamos National Laboratory after the proposal to store the material passed an environmental hurdle.

Activists and DOE managers say the waste should not be stored permanently at LANL. But the waste cannot be sent to WIPP because it comes from private sources. WIPP regulations say only transuranic military waste will be accepted there.

"DOE is trying to round up these orphaned sealed sources to manage in a responsible way," said Greg Lewis, director of the New Mexico Environment Department's waste-management division. "They're spread out everywhere."

However, Lewis said, the proposal for a second waste dump in southeastern New Mexico is in such early stages — and so little information has been provided — that the Environment Department can't comment on whether the dump is likely or even vaguely reasonable.

"Right now, it's just inquiries into the feasibility of any facility," Lewis said. "We have no details whatsoever. If we get an actual proposal, of course we'll look very critically at its technical merits.

"We haven't looked at it, so we can't say, 'Oh, that's a terrible thing,' or 'This is a great thing,' " Lewis said.

Lewis said it could be a problem that the private company is proposing a shallow burial of the waste. WIPP waste is buried about 2,100 feet below the Earth's surface, while the DOE's documentation shows another dump could be only 150 feet below the surface.

"The oil industry doesn't believe in being regulated and ... lobbied hard not to have these sealed sources kicked up to be classified as high-level."

DON HANCOCK
director of the nuclear-safety program at the Southwestern Research and Information Center in Albuquerque

However, Lewis said, even if the Environment Department began to look seriously at plans for a dump for the sealed radioactive sources, any such dump would be "tiny" by comparison to WIPP.

WIPP could eventually store up to 6.2 million cubic feet of waste. The DOE documents show that the proposed dump for the nonmilitary radioactive waste would be — at first — about 400 cubic feet.

However, anti-nuclear activists say they worry any dump licensed to accept such highly radioactive waste as GTCC could easily persuade regulators to allow it to accept vast quantities of low-level radioactive waste as well.

"New Mexico is really at risk of gaining an identity as the state of nuclear waste, a state that uses its wide open spaces as a place to put nasty things," said Greg Mello of the nuclear watchdog Los Alamos Study Group. "The U.S. has so much nuclear waste looking for a home, and getting a dump open is really important to many powerful people in the nuclear industry."

Mello said that private companies would likely not make much money storing only the waste from GTCC sealed sources, indicating that they could be hoping to eventually accept other nuclear waste as well.

The GTCC sealed sources could easily be high-level waste — the hottest, most radioactive kind, said Don Hancock, director of the nuclear-safety program at the Southwestern Research and Information Center in Albuquerque.

"We don't actually know (if they are high-level)," he said. "The oil industry doesn't believe in being regulated and ... lobbied hard not to have these sealed sources kicked up to be classified as high-level because it would be so expensive to store.

"Now, you've got some private companies who want to make some money," Hancock said. "If you think you can get a site a mile from WIPP and use WIPP transportation and get the DOE to give you millions if not billions of dollars at the taxpayer expense, you'd want to do that."

Hancock said that if Yucca Mountain opens under current proposed regulations, it would be able to accept the GTCC waste as well as radioactive materials from weapons work.

It is not clear from the documents where, precisely, the contractors might consider boring the waste holes. The names of the private companies have been blacked out on a copy of the proposal obtained by *The New Mexican*.

Lewis said he's not sure the state will receive any official proposal for such a waste dump, however.

"This is a rather unusual inquiry," he said.

LA Study Group protests at lab this week

The Los Alamos Study Group has been granted approval to conduct a silent vigil at the lab's Main Technical Area (TA-3) on Wednesday, Thursday and Friday from 7 a.m. to 6 p.m. The group will hold its vigil in the new parking lot off Pajarito Road, near the Lab's Van de Graaff facility.

In addition, the Study Group has received approval to distribute leaflets from 7 to 8:15 a.m. Wednesday, Thursday and Friday.

The group will hand out their leaflets at the following locations:

- near the Chemistry and Metallurgy Research Building at the northeast corner of the parking lot;
- on the sidewalk east of the Otowi Building at the bottom of the steps leading to the east entrance;
- in front of the newspaper racks near the curb outside the main entrance to the Lab's Plutonium Facility (TA-55); and
- on the sidewalk near the newspaper racks just northwest of the visitor center and Badge Office area.

Study Group members have agreed not to harass anyone or interfere with pedestrian or vehicular traffic and to abide by all Lab safety and security requirements.

Personnel in the Lab's Security and Safeguards (S) Division are asking employees to treat the group with courtesy and respect at all times, and to avoid any activities that could compromise the safety of employees or LASG members.

Those wanting more information about the protest should contact call Bill Sprouse or David Smith of the Special Projects Office at 665-3505. 9/5/00 LM

Nervous laughter

Although I never thought I'd see a picture of Godzilla in the *Bulletin of the Atomic Scientists*, I have to admit that I read every word of Janne Nolan's hilarious cooperative security analogy ("When Three Heads Are Better Than . . . Three Heads," July/August 2000 *Bulletin*).

Apparently, though, you're not the only ones needing a little comic relief from the nuclear threat: I understand that the Los Alamos Study Group—a serious and very earnest watchdog organization based here in Santa Fe that keeps tabs on the Los Alamos National Laboratory—has been informally screening some favorites from that genre, including *Them!*, which was mentioned in your mutant monster movie roundup ("Creature Discom-

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forts," July/August 2000 *Bulletin*), as well as *The Invasion of the Body Snatchers*.

Dianna Delling
Santa Fe, New Mexico

UC system likely to keep lab contracts

By KRISTEN DAVENPORT
The New Mexican

10/18/00 NM

The University of California will almost certainly continue to manage Los Alamos National Laboratory for at least five more years, Department of Energy officials announced Tuesday.

Despite months of uncertainty over the university's contract in the wake of several security breaches, the DOE will renegotiate the 57-year-old contract with UC — with some reworked language that federal officials maintain will improve security at the labs.

The current UC contract to manage the laboratories expires in September 2002.

However, after two computer hard drives containing nuclear secrets disappeared from the laboratory in June, DOE officials — under pressure from Congress — had said they might consider other options for lab management before that contract expired.

John Browne

The contract renewal will 'strengthen our longlasting relationship.'

In another alleged lab security breach, Los Alamos scientist Wen Ho Lee was fired from the lab in 1999 during an FBI investigation into alleged espionage. Lee was arrested and charged with 59 counts of misappropriating weapons designs and other secret data. But last month Lee pleaded guilty to one count of the indictment and was freed from jail.

Please see **CONTRACTS**, Page A-3

Continued from Page A-1

Tuesday, DOE Secretary Bill Richardson announced that he is accepting a recommendation that UC retain the contract through 2002 and that DOE should also try to renew the contract through 2005.

However, DOE will ask the university to hire subcontractors to improve security at LANL and its sister weapons lab, Lawrence Livermore near Berkeley, Calif.

DOE also wants UC to create a new job for a university vice president for lab management to "establish operational and management standards." The energy department also wants to create a new council on lab issues that would report to the university president.

"We're going to look at a variety of ways to improve operations and security," said Madelyn Creedon, deputy administrator for defense programs with the National Nuclear Security Administration, an Energy Department subsidiary that oversees national security.

"But we have decided we will enter into a new contract, and we will not compete with the contract for operating" the labs, Creedon said in a telephone news conference Tuesday.

She said the DOE and UC will work out details — and what changes will cost taxpayers — later.

Critics say the University of California has done a poor job overseeing the lab and was lax in its oversight of environmental protection, worker safety, national security and financial management.

Other critics say an academic, nonprofit institution such as UC should not be in the business of building bombs or maintaining the nuclear stockpile.

However, at the nuclear weapons labs, administration and scientists have almost unanimously supported the UC contract and have openly fretted about what would happen if that contract were put out for bid. The University of Texas has expressed interest in running the nuclear weapons labs, and several private companies such as Allied Signal and Lockheed Martin contract with the DOE to run other weapons facilities.

Lockheed Martin runs Sandia National Laboratories in Albuquerque, where much nuclear bomb work is conducted.

But LANL and Livermore scientists and lab supporters say the UC contract is integral to keeping employees happy.

The prestigious association with the university helps attract top scientists, officials say, and UC offers good financial benefits to scientists and technical employees.

LANL Director John Browne issued a statement Tuesday applauding Richardson's decision to leave the UC contract in place, saying it "will strengthen our long-standing relationship and assure continued scientific and technical excellence in support of the nation."

Sen. Pete Domenici, R-N.M., who has much control over the labs' funding in Congress, also said he was hopeful that changes to the contract will improve security at the labs. Domenici gives most credit for changes to the newly created National Nuclear Security Administration, headed by Gen. John Gordon.

The NNSA is a semiautonomous agency within DOE created March 1 to oversee security at LANL and Livermore. NNSA officials made the recommendation to Richardson to maintain the UC contract.

But those who oppose the decades-old relationship between UC and the weapons labs say the NNSA and DOE are just fiddling with language and aren't making substantive changes.

"This is more of the same," said Maryalia Kelley, head of TriValley CAREs, an antinuke group in Livermore. Kelley said her group believes UC should agree to continue its management of the laboratories only if the university also agrees to change the contract so the labs' core mission is diverted from nuclear weapons.

"The university should be pressing for that change," she said. "The fundamental issue here is the mission of the lab and not the question of who is going to manage Armageddon."

However, she said, the UC regents "have never indicated they're willing to press for that kind of change."

Greg Mello, director of the Los Alamos Study Group in Santa Fe, also issued a statement that said the proposed reforms to the UC contract to improve security "have no substance at all."

"The problems they are designed to solve are in public relations and morale, not security or project management," Mello said. He added that antinuke groups believe there is no oversight of the nuclear-weapons facilities because "the labs merely run to Sen. Domenici" to get what they want.

Mello said the reforms proposed by NNSA and DOE this week are simply creating more bureaucracy to give the appearance of real oversight — a charge the DOE denies.

"This doesn't create another layer (of bureaucracy)," Creedon said. "It will consolidate the university's supervision of the labs. Right now, (oversight agencies) report to several different people within the UC president's office. This new vice president will be a single focus."

Creedon also said the ideas outlined Tuesday are consistent with the idea of "integrated security." Earlier this summer, some DOE and UC officials had said that perhaps DOE would pull only security and project management from the UC contract and bid out those responsibilities.

Creedon said the NNSA decided against that because the federal government wants security "integrated into every single operation."

"After some reviews, ... it became clear that there were internal improvements that could be made to improve the overall security situation," she said.

In the past, the DOE contract has given the university $2.75 billion a year to pay salaries, operating costs and bonuses. Additional costs — for a subcontractor and new vice president — have not been determined.

University of California Hangs On to Lab Contract

By Ian Hoffman
Journal Staff Writer

10/18/00

A public university tapped 53 years ago to invent the world's first nuclear weapons will continue the enterprise at least three years more, despite a recent rash of safety, security and management failures.

Energy Secretary Bill Richardson said Tuesday he will extend the University of California's operation of Los Alamos and Lawrence Livermore nuclear-weapons design labs, with fairly minor though immediate reforms in the security arena.

Los Alamos lab director John C. Browne applauded the move.

"His decision to extend the UC contract will strengthen our long-standing relationship and assure continued scientific and technical excellence in support of the nation," Browne said in a prepared statement.

The reforms, proposed by National Nuclear Security Administrator Gen. John Gordon, call on the university to hire outside security and management consultants, at federal taxpayer expense. The school also must create a council of lab managers to advise its president and set up a university vice president to oversee the two weapons labs in California and New Mexico.

"That's nothing new," notes Christopher Paine, a nuclear-weapons analyst for the Natural Resources Defense Council.

"I don't think handing this back to the university shows much courage on Richardson's part," Paine said. "It's just the path of least resistance and the nation will suffer for it."

Yet employees of the labs have overwhelmingly backed keeping the University of California at the helm. DOE worried a management change would trigger a mass exodus of scientists into retirement and

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University of Calif. Keeps Lab Contract

from **PAGE 1**

private-sector jobs.

University president Richard C. Atkinson hailed the contract extension as "a vote of confidence."

"This step will be a welcome boost to our scientists and staff," Atkinson said in a statement. "As we move forward, we must address several important challenges, including rebuilding employee morale and continuing to recruit the very best scientists to our labs."

In the end, DOE executives decided to stick with the university for three years beyond the 2002 end of the current lab management contract. The stated reason echoed that given by former Energy Secretary Hazel O'Leary in 1996 for the last contract renewal: continuity.

"Right now, it's important that we maintain continuity," said DOE Assistant Secretary Madelyn Creedon, who also serves as deputy administrator in charge of nuclear-weapons programs in the National Nuclear Security Administration.

But if continuity is so important, asks Los Alamos lab watchdog Greg Mello, "why go through this charade?"

"What is especially boggling is that after a year that has been chock full of revelations of mismanagement that DOE would choose to discipline its nuclear lab contractor by extending the contract," Mello said. "If they're not looking at other contractors, then the DOE has no leverage to negotiate anything."

DOE executives debated putting the contract up for competitive bid. A consortium of Texas and New Mexico universities was mulling a bid in anticipation. But DOE rejected the idea.

"We discussed it and decided that since the fundamental science was not broken and was in fact sound, it was important to have continuity, to continue with the university," Creedon told reporters Tuesday by phone.

Richardson suggested in late June that he might split away security and perhaps lab operations from the university contract. The announcement Tuesday signals that idea is dead.

"It gets back to whether you want security to be integrated or to be separate," Creedon told reporters by phone. "The call at the end of the day is, we really want to figure out a way for it to be integrated."

Several members of Congress had demanded this year that the DOE terminate the university contract and put the contract up for bid.

But the lawmakers who control DOE's budget often come from states with a large DOE presence, such as New Mexico. And they generally backed keeping the university in charge.

"Stability at the lab is important, and I hope negotiations with the University of California go well," said Sen. Pete Domenici, chairman of the Senate Budget and Energy and Water Appropriations committees.

"In the past," said the New Mexico Republican, "the institution has demonstrated a willingness to accept changes and improvements in its management responsibilities. I believe this is still true."

Critics of the UC-DOE relationship — the longest-running government contract in U.S. history — say the renewal is not a surprise but evidence that the Energy Department has been co-opted by the university and its political allies.

Richardson himself was irate on learning this year that Lawrence Livermore managers had misled him into believing its giant laser-fusion project, the National Ignition Facility, was on schedule and within budget. Instead, the NIF construction budget alone is more than doubling in cost, to $2.5 billion.

A month after he decided to let the university continue with its current contract, five lab workers were exposed to an especially radioactive form of plutonium.

Richardson endured another embarrassment this spring, when two computer hard drives loaded with nuclear-weapons designs went missing more than a month from a vault inside top-security offices at Los Alamos.

The hard drives later resurfaced behind an office copy machine.

More recently, a federal judge scolded Richardson, calling him an "embarrassment to the nation" for his role in the prosecution and imprisonment of Wen Ho Lee, a Los Alamos scientist advertised as a dire threat to national security then let free on a guilty plea to a single felony.

"Given the whole episode with the National Ignition Facility and how they lied to him and the whole mishandling of the security issues and the Wen Ho Lee case," Paine said, "I'm just astounded that they would agree to extend the contract. They should have competed it and given more entities than the University of California a chance to bid on it."

DOE OFFERS UNIVERSITY A CHANCE TO REMAIN AT LABS; CRITICS HIT MOVE

Energy Secretary Bill Richardson last week announced a series of reforms that, if implemented by the University of California, could lead to a three-year extension of the school's management and operating contract to run Lawrence Livermore and Los Alamos national laboratories. But critics of the labs' management questioned why the department would reward the university with an extension in light of the problems with security since 1999.

The M&O contract with UC, which was renewed in 1997, is scheduled to expire in Sept. 30, 2002. If the university meets a series of requirements established by DOE, the contract to manage LLNL and LANL, as well as Lawrence Berkeley National Laboratory, would be extended to Sept. 30, 2005.

Under the reforms announced by Richardson, the university must:

— Establish a new position of vice president for laboratory management. This individual would have "authority to establish operational and management standards including security measures, for the weapons labs," DOE said.

— Hire subcontractors with expertise in security, facility operations, and project and construction management. The subcontractors would assist the lab directors in making overall security and policy decisions and "help the new UC Vice President obtain similar expertise."

— Create a Laboratory Senior Management Council. This group would report directly to UC President Richard Atkinson to "advise on key management and security issues," the department said.

Richardson's announcement on the contract is important on two levels, Atkinson said in a statement Tuesday. "The decision to proceed [with the extension] is a vote of confidence in a relationship that has brought great benefits to our nation for more than half a century," Atkinson said.

Just as important, Atkinson said, is the signal the announcement sends to employees at LANL and LLNL. Many DOE observers have predicted a mass exodus of employees from LANL and LLNL if DOE were to terminate the contract. There also has been speculation that UC might not bid on the labs' management if DOE opened it to competition, something that has never happened.

Atkinson called the DOE decision a "welcome boost" to lab employees. "As we move forward, we must address several challenges, including rebuilding employee morale and continuing to recruit the very best scientists to our labs. At the same time, we look forward to the opportunity to demonstrate our continuing commitment to superb science in the national interest."

Richardson based his decisions on the UC contract on recommendations from National Nuclear Security Administration chief John Gordon, who has been studying the potential restructuring of the UC contract since June 30. Sen. Pete Domenici, R-N.M., who helped create the semiautonomous NNSA, applauded Richardson's and Gordon's handling of the matter. Congress last year ordered the establishment of NNSA as a semiautonomous agency to manage DOE's nuclear weapons programs.

The law authorizing NNSA allows Gordon to recommend policy changes, which then must be approved by the secretary before they are implemented. "This announcement shows that the process is beginning to work," the senator said in a statement last week.

Domenici agreed with Atkinson's view on the impact of DOE's decision on morale at the labs. "Stability is important at [LANL] and I hope the negotiations with UC go well. In the past, the institution has demonstrated a willingness to accept changes and improvements," the senator said. "I trust [UC] will work diligently with General Gordon to implement the security upgrade recommendations at LANL and LLNL," he added.

But not all members of Congress were happy with the department's decision. Rep. John Dingell of

Michigan, the ranking Democrat on the House Commerce Committee, said Wednesday the proposed extension shows DOE resists security reforms. Dingell, and Rep. Joe Barton, R-Texas, have been among those in Congress who have called on DOE to fire the university. "This latest coddling of its contractor, the University of California, demonstrates 'business as usual' at the DOE and its labs," Dingell said.

Dingell noted that numerous reports concerning DOE have cited lab officials and employees for failing to emphasize security as a top priority in the wake of the Wen Ho Lee case. Lee, a former LANL weapons designer, was fired from the lab in March 1999 for failing to cooperate with a security investigation. "And now the department has rewarded UC with yet another [three-year] contract for these cosmetic actions which were actually lab-initiated responses to the bad press," he said. "The absence of accountability is alarming, but no longer surprising."

Two anti-nuclear groups also criticized the DOE announcement. Marylia Kelley, executive director of Tri-Valley Communities Against a Radioactive Environment, Livermore, Calif., said in an interview Thursday that any plans to extend the UC agreement would contradict the department's contract reforms. That effort, started in 1994 under former Energy Secretary Hazel O'Leary, has favored competition as a means of attracting the best possible management for department facilities. Kelley said DOE should open the labs' management contract to competition, as it did at the Fernald Environmental Management Project in Ohio. "This allowed both employees and the public to comment on the current contractor's activities," she said of the ongoing solicitation at FEMP.

She also doubted whether the establishment of the new vice president for lab management at UC will have any meaningful effect on improving lab operations. "I think what you'll see are a series of lateral moves made by employees as a result of this new office being created," Kelley said.

If those moves become reality, Kelley said that will only worsen the prospects for projects like the National Ignition Facility at LLNL, which is over budget and behind schedule. "These moves are nothing more than cosmetic," she said.

Greg Mello, director of the Los Alamos Study Group, Santa Fe, N.M., said in an interview Thursday that DOE's decision is disappointing. He maintained that the university has had years to improve the labs' management, but has failed to acquire the necessary expertise to do so. UC has managed LANL and LLNL since 1942 and 1952 respectively. "You would think that — after 58 years — the university would have acquired that expertise by now. These reforms are an admission that UC does not have that expertise," Mello said. — *Tarun Reddy*

Committee to discuss LANL water contamination

▶ *Task force will study contamination possibility for Santa Fe water supply*

By KRISTEN DAVENPORT
The New Mexican

11/1/00

For years, scientists have dumped radioactive materials into canyons surrounding Los Alamos National Laboratory.

Now a task force is looking at whether water contamination in Los Alamos could seep into Santa Fe's groundwater. That task force, created by the Santa Fe City Council in September, meets informally tonight, although the mayor has not yet appointed its members.

But some environmentalists believe Santa Fe is wasting its energy because the committee will be looking into something that is impossible.

"There is absolutely no chance that the groundwater contamination in Los Alamos, now or in the future, could contaminate the water supply of Santa Fe," says local lab watchdog Greg Mello.

Mello, along with state environment officials, say it's unlikely that underground water could flow east and up to Santa Fe's aquifer because most Los Alamos area water comes back to the surface at the Rio Grande and flows away. If deep water did manage to travel under the Rio Grande, any contamination would be so diluted by the time it hit a well near Santa Fe, it could not be traced, they say.

But those hoping to form the study group say recent news that radioactive tritium was found in a drinking-water well in Los Alamos indicates contamination has gone deep into the region's water reserves and could eventually migrate east into Santa Fe's supply.

And, says organizer Hank Daneman, a retired engineer, why take chances?

"For a long time, it was felt it was 'impossible' for any of these contaminants to flow into the aquifer at all because of the layers

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of impervious materials (bedrock)," said Daneman. "However, we learned a few days ago that tritium is in that water. It's no longer impossible."

The tritium, found in a well northeast of lab property, occurred in small amounts, posing no danger to public health, officials said.

Hopeful members of the city's Water Quality Task Force want to begin official meetings this month — once its membership is firmly established — and plan to start by asking people from Rocky Flats to talk about water contamination in that area of Colorado.

The Department of Energy, which runs the nation's nuclear weapons complex, replaced the water supply for Westminster, Colo., after it was discovered that work at Rocky Flats was threatening the town's drinking water.

Chuck Montaño, a lab employee and Santa Fe activist who hopes to serve on the water task force, says the group's job is to determine whether future water supplies for Santa Fe — wells that have not yet been drilled, which could help solve the city's dire water trouble — are threatened by contamination from either Los Alamos or industrial operations upstream.

"We really don't know if there's any threat to the wells, and that's our purpose — to determine whether there's a threat," Montaño said. The task force, if it's finally put in place, will try to identify money that can be used for an independent evaluation of the hydrogeology of the area and assess the risk to Santa Fe's water supply.

At issue, Montaño said, are wells that are planned for the future north of Otowi Bridge, the highway bridge that crosses the Rio Grande on the way to Los Alamos. Those wells are closer to the source of contamination and therefore could be threatened.

However, the wells are north of Los Alamos, on the east side of the river. Hydrologists believe water flowing from the lab flows south and doesn't crossover from the west side of the Rio Grande.

James Bearzi, the state's chief of hazardous materials, says he also believes it's "highly unlikely" Santa Fe taps could ever shower locals with Los Alamos radiation.

"Los Alamos County's water is a much greater concern," Bearzi said. "There are a lot of reasons why the possibility is so remote. But the governing body (of Santa Fe) has spoken, they want to look into it, and we're here to help."

Anyone interested in serving on the committee can call Montaño at 466-3417.

LANL budget jumps to $1.7 billion

11/14/00

By KRISTEN DAVENPORT
The New Mexican

Spending on weapons work has doubled in six years and is also double the average of what was spent each year during the Cold War, according to an outside analysis of the budget.

Los Alamos National Laboratory has a nuclear-weapons budget for 2001 that is, for the first time, bigger than its budget during the Manhattan Project when the first atomic bomb was built.

In the 2001 federal defense budget, signed into law Oct. 27, LANL was given $935 million for nuclear weapons work and stockpile stewardship, as well as millions more for environmental cleanup and other defense-related work.

The total 2001 budget, including $200 million for cleanup after the Cerro Grande fire, is about $1.7 billion.

Spending on weapons work has doubled in six years and is also double the average of what was spent each year during the Cold War, according to an outside analysis of the budget.

The total Manhattan Project budget from 1943 to 1945 was about $919 million in today's dollars, and the Cold War spending on nuclear weapons from 1970 through 1995 averaged about $495 million.

The Los Alamos Study Group, an anti-nuke lab watchdog organization, performed an analysis of the lab's budget over its 57-year history, adjusting all amounts for year 2000 dollars.

Congress' final LANL budget for 2001 is also millions above what the U.S. Department of Energy had requested for the lab in the first place.

"It's an obscene amount of money to throw at improving weapons of mass destruction when half the world is hungry and without proper medical care or education," said Greg Mello, director of the study group. "It's an appalling testimony on Western values."

But lab officials say there's really no news here. They say that stockpile stewardship — maintaining the nation's nuclear-weapons stockpile without underground or other testing — costs a lot of money.

"Duh," said lab spokesman Jim Danneskiold. "That's not a surprise. The budgets have been predicted for years. Everyone said stockpile stewardship was going to be expensive."

And Sen. Pete Domenici, R-N.M., said the increased budget for LANL is good news in a year of low morale amid security troubles and national scandals for the nation's nuclear lab.

"We don't do underground testing and

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haven't in more than six years," Domenici said. "When you don't do testing, it's more expensive. The truth of the matter is, we're spending what we think is necessary."

Domenici pointed to a recent DOE report that said the nation needs to spend $5 billion to $8 billion more than anticipated in the next 10 years to improve nuclear weapons infrastructure — the buildings and laboratories where work is done — to meet future weapons needs.

"The more people who are against our nuclear-weapons program and against Los Alamos and against the sophistication we're trying to build, it makes me proud to be on the opposite side from them," Domenici said Monday.

The budget includes a total of $5.02 billion for nuclear-weapons activities across the DOE complex.

Domenici said "plenty of people who are really knowledgeable" believe the government must continue to support stockpile stewardship and building the infrastructure.

But others say the money simply isn't needed, and stockpile stewardship shouldn't cost so much.

"The budget is bloated with unnecessary projects that seek impossible goals," Mello said, such as the lab's attempts to simulate on a computer every aspect of a variety of different kinds of nuclear explosions.

"This budget is predicated on changing all the weapons in the stockpile to new variations or modifications or entirely new weapons without testing," Mello said. "Many people at Los Alamos believe this is impossible."

The budget passed late last month includes a total of $5.02 billion for nuclear-weapons activities across the DOE complex, including LANL and its sister laboratory, Lawrence Livermore, in California. That is $580 million more than spending on nuclear weapons in the year 2000.

LANL Opens Beryllium Lab

■ *Building features ventilation system that cleans the air of harmful particles* 11/15/00

BY JENNIFER MCKEE
Journal Staff Writer

After five years of planning, $14 million and activists' suspicions, Los Alamos National Laboratory formally opened its new beryllium technology facility Tuesday — a well-ventilated cinder block building dubbed the "flagship" of safety.

The building is designed to flush fine particles of beryllium — an especially lightweight, strong metal used in things from golf clubs to nuclear bombs — from the air as machinists form it into parts, said Steve Abeln, the lab's beryllium project leader.

The building also plays a role in the lab's ability to make plutonium pits, said Jim Danneskiold, a lab spokesman.

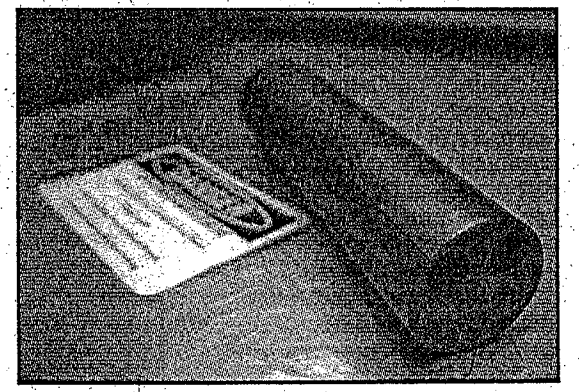
In general terms, a plutonium pit is the explosive part of a nuclear bomb. Scientists at Los Alamos aren't building weapons-quality pits right now, Danneskiold said, but the lab has been designated the DOE's new pit source now that Cold War-era bomb plants are closed.

Beryllium is fairly safe when it's solid, Abeln said. But according to Lee McAtee, deputy director of the lab's Environment, Safety and Health Division, machinists working with the silvery metal shave off fine particles that can lodge in the lungs and cause lung disease.

"The point is to have zero exposure," he said.

In the new plant, vents suck air immediately away from the beryllium working machines. Room air is further pumped out

See **BERYLLIUM** *on* **PAGE 3**



Machined beryllium sits as a sample of work at the new beryllium technology facility Tuesday. The metal is used in a wide array of products ranging from golf clubs to nuclear bombs.

Beryllium Lab Opens At LANL

from **PAGE 1**

from vents along the floor, with fresh air pumped in from above. All told, said Kathryn Creek, an industrial hygienist at the lab, air from work areas and the building passes through three filters, each removing between 85 percent and more than 99 percent of all fine particulates. The air then passes through a stack outside.

But safety isn't the only concern with beryllium, said Greg Mello, director of the Los Alamos Study Group, a lab watchdog group.

"I'm very suspicious that they are dragging out pit production so they can get the maximum amount of money for it," he said.

However, McAtee said Los Alamos must maintain the ability to make pits, whether or not scientists there ever build a new bomb.

WATCHDOG'S STUDY ASSAILS BUDGET ... 11/16/2000
Publication: Albuquerque Tribune
Category: Local News
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Published: 11/16/2000
Page: A3
Watchdog's study assails budget for Los Alamos Lab
Byline: Lawrence Spohn
lspohn@abqtrib.com / 823-3611

The current budget for Los Alamos National Laboratory is more than double the average annual lab budgets at the height of the Cold War, a watchdog group based in Santa Fe says.

The Los Alamos Study Group on Wednesday released an analysis that called the 2001 lab budget of $1.54 billion "unprecedented" in peacetime.

The lab budget represents "a concerted effort toward the continued evolution of the nuclear arsenal," charged Greg Mello, a study group analyst and a physicist.

He said the lab's budget is bucking an international trend to contain or reduce the role of nuclear weapons as well counteracting the government's claims that it is not designing new nuclear weapons.

"This has been going on now for the last six years, and this continuing escalation in the budget represents a bid for permanent legitimacy of nuclear weapons," Mello said.

Lab spokesman John Gustafson said that Los Alamos officials would have no comment and that the lab's budget "reflects the needs and importance of the (lab's) mission."

He said "the level of funding is set by Congress and the administration" and is based on the costs of complex scientific programs and goals that are considered crucial to maintaining the nation's nuclear weapons.

Mello said his funding analysis reveals that "most of the work isn't vital to the safety, security or reliability of existing nuclear weapons."

He said Los Alamos, like nuclear weapons siblings Sandia National Laboratories in Albuquerque and Lawrence Livermore National Laboratory in California, is gearing up for "future weapons not yet developed."

He said the costs are focused on weapons design, research and testing infrastructure, such as "a large suite" of expensive nuclear weapons simulation machines and modeling supercomputers that "you don't need to maintain the existing U.S. nuclear deterrent."

Officials at the three nuclear weapons labs say these machines are crucial in the Department of Energy's Stockpile Stewardship Program to replace underground testing of nuclear bombs.

Mello countered the escalating budgets and nuclear weapons simulators are laying the groundwork for "further U.S. intransigence on the disarmament front."

Mello said the historical analysis of Los Alamos budgets shows:

*Spending at the lab has doubled in the last six years in constant year 2000 dollars.

*Nuclear weapons spending now is more than twice the annual budget averages during the Cold War years.

*Nuclear weapons spending is triple the spending level in the 1970s, when tense relations between the United States and the former Soviet Union were relaxed during a so-called period of detente.

*Spending this year alone will exceed the total amount spent (in current dollars) during the three-year Manhattan Project at Los Alamos to design, build and test the first atomic bombs.

*Nuclear weapons spending at Los Alamos this year is on schedule to exceed the administration's original budget requests for the lab by $394 million and is $606 million more than was spent in the program last year.

Mello said the analysis does not include money for environmental remediation of the Cold War legacy of radioactive and chemical contamination at the lab, nor some $200 million additionally appropriated to the lab to cope with the costs of last spring's Cerro Grande Fire.

He said the lab's long-range plan calls for $5 billion in nuclear weapons infrastructure improvements over the next decade, part of DOE's proposal to remodel and consolidate the nuclear weapons complex at a cost of some $50 billion nationally.

A recent DOE Inspector General's report concluded those programs will need another $5 billion to $8 billion, Mello said.

Radical Grace
A Newspaper of the Center for Action and Contemplation
Vol. 13, No. 6 November–December 2000

READER RESPONSE

* * * *

Information Overlooked

In "Nuclear Waste: See No Evil," Mario Garrett did a fine job of discussing some of the past (and present) failures of the nuclear industry. A couple of his points bear some expansion.

Garrett begins his article by pointing out the nuclear industry was begun in the United States as a weapons project, and that the public relations aspects of the project were of paramount importance from the beginning—as they have been ever since. What General Groves achieved was to set up a program so large, so compartmented, so secret, and one which dealt with objects and with knowledge of such awesome destructive import, that this program became, in effect, a sovereignty unto itself. The end of the war came and went, but the Manhattan Project continued, right down to the present day.

Secrecy, compartmentalization, and the techniques of deception are still dominant in the culture of the military nuclear program. Most scientists and engineers in that program, if you talk to them, have little idea of how their work fits into the overall picture, or why. With the exception of upper management, questions about mission or purpose are usually answered with slogans and half-truths gleaned from the passive observation of briefing slides.

Using these PR techniques, the U.S. nuclear weapons program has been able to maintain robust and even increasing funding despite the end of the Cold War—and despite repeated offers from Russia to mutually dismantle all but a small fraction of our arsenals.

About six trillion dollars has been spent on nuclear weapons so far in this country—an average of about $274 million dollars per day for six decades. Current spending on all aspects of U.S. weapons of mass destruction is about $90 million per day.

About half of the U.S. warhead and bomb work (not the work on delivery systems) is done in New Mexico, far more than in any other state. Perhaps many readers of *Radical Grace* do not know that there are almost three thousand nuclear weapons in Albuquerque.

In his historical introduction, Dr. Garrett skipped over an important point.

The first, the most important—and until now the most successful—job for the "PR machine" he mentioned was to justify the bombings of Hiroshima and Nagasaki to the educators and historians who would shape the thought of future generations. That shaping was the self-avowed aim of a post-war PR campaign that included a young policy wonk named McGeorge Bundy—later to play a supporting role in justifying the Vietnam conflict—former Secretary of War Henry Stimson, and President Truman himself.

We know today that the Hiroshima and Nagasaki bombs were dropped over the objections of many (possibly even most) top-level military commanders, that the official post-war bombing survey concluded that these bombings did nothing to shorten the war, and that the myth of "hundreds of thousands" of lives saved by the use of nuclear weapons (sometimes a larger number is used) was a very intentional fabrication that had nothing to do with official U.S. invasion plans.

The very idea of an invasion was more a product of interservice rivalry over who would get the credit for ending the war and therefore the best claim on post-war appropriations than of any real military need.

In fact, the war was essentially over and could have been completely over—by the time these weapons were used, no matter what the soldier on the ground may have thought at the time. Japan had certainly been suing for peace for months. In the end, the United States accepted a surrender that retained the emperor (as a hedge against Japanese social disintegration and the risk of communism), which was the main sticking point prior to the bombing.

Despite decades of successful dissimulation, the nuclear facade is slowly breaking apart at every seam. On the points above, readers may wish to review *Hiroshima's Shadow* (Bird and Lifschultz, eds.), or *The Decision to Use the Atomic Bomb*, (Alperovitz). These authors have had access to newly-declassified materials which were not available until rather recently.

Greg Mello
Los Alamos Study Group
Santa Fe, New Mexico

Editor's Note:
Los Alamos Study Group is a non-profit, research-oriented, nuclear disarmament organization. Their web site is: www.lasg.org. Their mailing address is 212 E. Marcy St. #10, Santa Fe, NM 87501.

* * * *

Scientists consider new breed of nuke

▶ *Mini-nukes, touted as weapons against rogue nations, are being studied and could be produced in part at LANL*

12/10/00 By KRISTEN DAVENPORT
The New Mexican

Some U.S. military officials, nuclear scientists and members of Congress say the United States must soon develop a new kind of low-yield nuclear weapon — a mini-nuke that could burrow into the earth to blow up an underground bunker filled with chemical or biological weapons.

Despite a federal law that forbids development of mini-nukes, Los Alamos National Laboratory weapons chief Stephen Younger released a paper this summer saying the nation will need precise, low-yield weapons and should consider building them.

It appears some senators agree. They might push for a change to the 1994 federal law that prohibits the design and manufacture of mini-nukes.

But for now Congress has agreed to authorize $6 million for a study by the Energy and Defense departments of the feasibility of using low-yield weapons to attack hardened and buried targets.

The Defense Authorization Act, passed in October, says the study must be completed by next July.

It's not clear whether Younger or other LANL weapons managers will be involved with that study. But if the United States decided to build mini-nukes, experts say it's likely they would be partially built in Los Alamos because the lab is capable of producing nuclear pits — the fissioning cores of nuclear bombs.

Some peace activists are worried that recent developments indicate a shifting attitude in Congress and the U.S. government toward another arms race.

Please see **MINI-NUKES**, Page A-7

MINI-NUKES

Continued from Page A-1

"It's not a huge change in policy, but it is a shift," said Greg Mello, director of the Los Alamos Study Group, a lab watchdog. "It gives newfound legitimacy to this effort."

Mello said it's likely any report that emerges next summer will say the United States needs the low-yield weapons, "and then they can use this report in the future so they can keep going."

The case for mini-nukes

The military has documented well its need for a mini-nuke, or conventional low-yield, earth-penetrating weapon.

And Defense Department planning documents released to a California anti-nuclear group, the Western States Legal Foundation, last month indicate that the military is eager for lab scientists to study low-yield weapons against buried targets and is planning tests of how weapons behave in underground tunnels.

Although the United States has about 5,000 high-yield nuclear weapons in its stockpile — plenty to deter aggression from major nuclear powers such as China or Russia — military experts worry that rogue nations such as Iraq aren't threatened by those bombs because it's so unlikely they would be used.

But a mini-nuke — which is expected to cause less collateral damage, fewer fatalities and reduced radioactive fallout — might present more of a threat. While its explosive power would not be nearly as strong as most of the nuclear weapons in the U.S. stockpile, it could be more precisely targeted to an enemy bunker or facility.

Technically, a mini-nuke is a nuclear bomb that carries about 100 tons of explosive power. According to a 1991 article in the military journal *Strategic Review*, the United States had plans for a 10-ton "micronuke" and a 1,000-ton "tiny nuke." By comparison, the bomb dropped on Hiroshima was 13,000 tons.

Weapons now in the nuclear stockpile are all larger than 5,000 tons; the 1994 Congressional prohibition covered any weapon that exploded at less than 5,000 tons.

However, even a 10-ton micronuke would pack a punch 10 times bigger than the largest non-nuclear bombs dropped by the United States during the Persian Gulf War.

The weapons community began thinking about low-yield weapons directed at underground targets — or at above-ground targets where low collateral damage and fallout was desirable — after the Persian Gulf War ended with Iraqi President Saddam Hussein still in power. LANL abandoned Project "Plywood" (PLYWD, or Precision Low-Yield Weapon Development), when Congress forbade the Department of Energy to do any work on low-yield weapons. According to LANL spokesman Jim Danneskiold, the lab "is not working right now on any low-yield weapons."

A new nuclear bomb has not been built in the United States since the 1980s, and no nuclear testing has been done in about a decade. But the government spends about $4.5 billion a year maintaining the nuclear stockpile and building facilities to simulate nuclear blasts to replace live nuclear testing.

Sam Cohen, one of the scientists who designed the original neutron bomb — a low-yield nuclear weapon — said the United States desperately needs the mini-nukes in its stockpile and thinks American lives would have been spared if mini-nukes had been used in the Korean and Vietnam wars, as well as the Persian Gulf War.

But he doesn't think the United States will ever use one of the weapons.

"In that sense, it's a colossal waste of taxpayer money" to even study the issue, Cohen said.

An aide for Sen. Wayne Allard, R.-Colo., who spoke on condition he not be identified by name said the senators pushing for a study of low-yield weapons only want the Energy Department to be more free to talk with the military about its needs.

Allard was one of the sponsors of the original legislation asking for a repeal of the 1994 ban on low-yield nuclear weapons. He voted in favor of spending $6 million for a study on the topic.

"People have been saying this will lead to a new weapon," the Allard aide explained. "But this is just allowing them to talk about low-yield weapons ... even conventional ones. We could do a study on building a rainforest in Washington, D.C., and that doesn't mean you're going to get a rainforest there."

Another arms race?

Others say the push for low-yield weapons is a sign that the United States isn't taking its treaty obligations seriously and indicates a deep need for a national discussion on nuclear policy.

Those who oppose mini-nukes argue that by agreeing to new nuclear weapons, the United States is violating disarmament treaties and could provoke other nations into another arms race.

"The military clearly is thinking about this," said Andy Lichterman, program director for Western States Legal Foundation. "I would say that the ban on mini-nuke development is under attack, and there's a danger that the (new law) authorizing this study will be taken as a license to work on new nuclear weapons."

Mello said the nuclear-weapons labs push for mini-nukes and other weapons projects simply because they have no defined mission since nuclear weapons are worthless.

"They need a *raison d'etre*," Mello said. "This is about their long-term legitimacy problem."

William Arkin, a disarmament advocate and columnist on military issues for *The Washington Post*, says hype over mini-nukes is — more than anything — a distraction from real nuclear issues that politicians and others want to avoid, such as the lack of a solid U.S. nuclear policy.

During the presidential campaign, Texas Gov. George W. Bush indicated that if he were elected, the government would review its nuclear posture. "And nothing is going to happen until that review is done," Arkin said.

"The Clinton administration has failed to determine what our nuclear policy should be," Arkin said, adding that until a new administration reviews the nation's nuclear posture, talk about mini-nukes is "nothing but agitation."

Arkin thinks a Bush administration — with Gen. Colin Powell as the likely secretary of state — would be more likely to advocate reductions in nuclear weapons and have more commitment to global-disarmament policies.

"In some cases, we should expect Bush will take more action regarding some of these irritating nuclear issues than a Gore camp ever would," he said.

Arkin said the Air Force and Navy need other weapons more than they need earth-penetrating mini-nukes.

In fact, the military already has some conventional weapons that can penetrate many feet of earth. The effort is toward bombs that are more precise or bombs that can burrow deeper.

The push for mini-nukes among nuclear scientists such as Younger is self-serving, he said.

"We can't have nuclear testing, we're losing scientists, and it would be a good morale booster (to be working on something new)," Arkin said. "Don't underestimate that factor. ... A new warhead is a new welfare project (for nuclear scientists)."

But LANL's Younger, who declined to be interviewed, has said his paper advocating low-yield weapons is simply an effort to get people talking about U.S. nuclear policy and what weapons will be needed in the future.

"Now is the time to re-examine the role and composition of our nuclear forces," Younger wrote. "New technologies take at least a decade to move from the concept stage to the point where we can rely on them for our nation's defense."

Congress Approves Funding for Mini-Nuke Study

12/12/00

The Associated Press

Congress has agreed to authorize $6 million for a study of the feasibility of using low-yield nuclear weapons to attack hardened and buried targets, although a 1994 federal law prohibits the design and manufacture of such "mini-nukes."

The Defense Authorization Act, passed in October, says the study must be completed by July.

In a paper released last summer, Los Alamos National Laboratory weapons chief Stephen Younger said he thinks the nation will need precise, low-yield weapons and should consider building them.

"It's not a huge change in policy, but it is a shift. It gives newfound legitimacy to this effort."

GREG MELLO, DIRECTOR OF THE LOS ALAMOS STUDY GROUP

It's not clear whether Younger or other Los Alamos weapons managers will be involved with the study.

If the United States decided to build mini-nukes, experts say it's likely they would be partially built in Los Alamos because of the lab's capabilities.

A mini-nuke is a nuclear bomb that carries about 100 tons of explosive power. Even a 10-ton micro-nuke would pack a punch 10 times bigger than the largest non-nuclear bombs dropped by the United States during the Persian Gulf War.

Although the United States has about 5,000 high-yield nuclear weapons in its stockpile, military experts worry that nations such as Iraq aren't threatened by those bombs because it's so unlikely they would be used.

But a mini-nuke — which is expected to cause less damage, fewer fatalities and reduced radioactive fallout — might present more of a threat.

Some peace activists worry that developments indicate a shifting attitude in Congress and the U.S. government toward another arms race.

"It's not a huge change in policy, but it is a shift," said Greg Mello, director of the Los Alamos Study Group, a lab watchdog organization. "It gives newfound legitimacy to this effort."

A new nuclear bomb has not been built in the United States since the 1980s, and no nuclear testing has been done in about a decade.

"The military clearly is thinking about this," said Andy Lichterman, program director for Western States Legal Foundation. "I would say that the ban on mini-nuke development is under attack, and there's a danger that the (new law) authorizing this study will be taken as a license to work on new nuclear weapons."

Critics say LANL gets windfall from blaze

By KRISTEN DAVENPORT
The New Mexican

Dec. 17 2000

Los Alamos National Laboratory plans to use some of its millions of Cerro Grande fire dollars to build a new operations center and offices for workers.

The federal government so far has released $342 million in cleanup and reconstruction money to the nuclear-weapons laboratory — compared with $500 million earmarked for the entire town, where about 400 families lost their homes as a result of last spring's blaze.

And some local politicians and lab-watchdog groups wonder whether the lab is taking advantage of the situation, using the money for items that managers wanted anyway.

"It's really an enormous amount for the lab," said State Rep. Max Coll, D-Santa Fe. "It seems disproportionate to me, but I'm not entirely aware of what damage (the lab) suffered, so I don't really know."

The legislator said, "It does seem inordinately large, compared to the town."

Of the roughly $500 million designated for reparations to Los Alamos families and businesses who suffered losses, $16.4 million has been handed out so far.

At the lab, about 40 buildings — many of them portables and trailers, and many of them empty — were burned in the fire, which started as a National Park Service prescribed burn but quickly

Please see LAB, Page A-4

12/17/2000

LAB

Continued from Page A-1

spread. About 8,000 acres were scorched at LANL, or one-third of the entire 27,000-acre lab property.

Lab officials say much of the $342 million will be spent on repairing physical damage and environmental remediation to prevent floods and the possibility of lab contamination washing off into the Rio Grande in the event of a heavy spring runoff or big rainstorms. About $100 million is earmarked for those efforts.

But the spending plan also includes buildings and construction projects.

One big-ticket item is a $20 million emergency-operations center the lab plans to build, LANL spokesman Jim Danneskiold said. The weapons lab also will spend $10 million for two 25,000-square-foot office complexes that will house about 130 workers each.

In addition, the lab will spend $29 million for "waste-management mitigation" — replacing the fabric domes at Technical Area 54 that cover hundreds of barrels of contaminated waste, much of it bound eventually for the Waste Isolation Pilot Plant near Carlsbad.

Another $25 million will be spent to replace fire-alarm systems throughout the lab, and $8 million will be spent for a new multichannel emergency radio system. From $15 million to $20 million has been spent on infrastructure — replacing 100 burned power poles, rebuilding some roads and replacing gas lines or other wiring.

The lab also requested and received about $6 million for work at the Dual-Axis Radiographic Hydrotest Facility, a lab facility under construction that will be used to take X-rays of nuclear pits during simulations of nuclear explosions. Some of the equipment was damaged during the fire, lab officials say.

"Those smoke clouds seem to have had a golden lining for the lab," said Greg Mello, director of the Los Alamos Study Group in Santa Fe, a disarmament organization. Mello said he doesn't understand why the lab can't use one of its existing 2,000 buildings for an emergency center rather than spending $20 million for a new one.

"I'd like to know what kind of emergency they are anticipating," he said. "Also, everything at the lab costs 10 times what it would in the private sector."

But lab officials say the money is definitely needed for remediation after the fire. The Cerro Grande blaze was not the first time a forest fire has scorched lab acreage. In 1996, the Dome fire burned on the fringes of lab property. In the 1970s, La Mesa fire burned about 2,500 acres at LANL. A lot of the money will be used for thinning trees to prevent future disasters, lab officials say.

"Our budget requests were reviewed by the Department of Energy and the Office of Management and Budget and approved by Congress," said communications director John Gustafson.

A meeting is scheduled Monday with LANL environmental workers, the state's environment department and anti-nuclear activists to talk about environmental repair work and stopping the spread of contamination off lab property in the event of flooding next spring or summer.

The meeting of the Interagency Flood Risk Assessment Team is set for 4 p.m. at the Hilton on Sandoval Street. Various groups will have poster displays, and from 5 p.m. to 6:30 p.m. officials will give presentations about postfire work at the laboratory.

12/20/00
SF REPORTER

SOMETHING MISSING

A bag of cattail reeds collected from areas near the Los Alamos National Laboratory that were burned in the Cerro Grande fire sat in three plastic bags. A geiger counter sat atop the bags, rapidly clicking away, indicating radioactivity. When it was pulled away, the clicking slowed dramatically. This "exhibit," set up by the watchdog group Los Alamos Study Group, was an ominous sight upon entering an otherwise low-key evening of reports on the aftermath of the Cerro Grande Fire.

The Inter-agency Flood Risk Assessment Team, a team set up to investigate and inform the public of flood contamination risks from the fire, held an open house at the Santa Fe Hilton Dec. 18 that included speakers from the IFRAT team, US Rep. Tom Udall, D-NM and a question and answer session.

IFRAT's preliminary findings, released at the event, stated that there are no acute toxicity levels in the water or sediments in the canyons around Los Alamos. Yet there were elevated radiation levels in some ash samples. "This is elevated but not alarming," said Ralph Ford-Schmid of the New Mexico Environment Department.

Ford-Schmid said plutonium, americium and strontium are all radionuclides that the environment department normally looks for at LANL.

Be that as it may, Los Alamos Study Group Director Greg Mello said the meeting was little more than a "set piece performance to make the audience feel like those involved are concerned." As far as LASG's geiger-counter display at the Hilton, Mello said, "Those cattails are my way of saying that we need to make this discussion a little more concrete." **(BMcL)**

BEN MCLAUGHLIN

Publication: Jnl Legacy 1995 to July 2005; Date: Dec 24, 2000; Section: Journal North; Page: 68

Section--Opinion Edition--Journal North Date--12/24/2000 Page-- 4

LETTERS

Cleanup Dollars Must Be Well-Spent

LAST MONDAY NIGHT (Dec. 18), at the public open-house for the Interagency Flood Risk Assessment Team in Santa Fe, the table manned by the Los Alamos Study Group (LASG) caught my attention.

On the table were bags of dried vegetation that Mr. Greg Mello, chairman of the LASG, collected on LANL property, presumably from a contaminated site identified for remediation. A radiation meter registered about 0.3 millirems (mrem) per hour.

Mr. Mello presented a bag to James Bearzi, Chief of New Mexico Environment Department's (NMED) Hazardous Waste Bureau, and told Mr. Bearzi that he had many more bags in his office.

To put this dose into perspective, the recently published LANL Environmental Surveillance Report shows that the hypothetical, maximally exposed member of the public received 0.7 mrem during 1999 from all operations past and present of LANL.

In a few hours of being near the "bags" last night, members of LASG and others in the room may have received more radiation dose from those bags than did members of the public from an entire year from LANL causes. Certainly, they received more dose than if the contamination had been left in place.

Mr. Mello is well-versed in radiation from his past job at NMED and his current work with LASG. He clearly does not fear the small radiation doses from the bags and also is not concerned about others receiving such doses from his actions. Implicitly, he is saying that low levels of radiation are not of concern for human health, a positive, rational, and technically defensible statement.

All taxpayers have a stake in seeing that dollars are spent wisely and effectively to clean up radioactive wastes. I hope that we can use the common ground established by our mutual recognition that low levels of radiation are not harmful to move toward a more reasonable approach for cleanup and other issues regarding radiation dose. Lets spend our dollars only where they will make a real and positive difference to human health.

Dave Kraig

Pojoaque

Lab Workers To Get Anti-Nuke Message

12/29/00

Study Group Sending Cards

By Jennifer McKee
Journal Staff Writer

A Santa Fe anti-nukes group plans to send all 8,000 employees of the Los Alamos National Laboratory New Year's cards encouraging them to slow the spread of nuclear weapons and wishing them a "wonderful new year."

The cards, each hand-painted, are expected to go out in the mail this week and will be mailed to the employees' home addresses, provided they are in the phone book, said Greg Mello of the Los Alamos Study Group, the activist group behind the cards. The group also pays for a smattering of anti-nuke billboards in the region and other anti-nuclear efforts.

"I hope we have enough," Mello said. "We want to reach directly to lab employees to let them know we're here, let them know we respect them. Not everyone at the laboratory supports nuclear weapons."

The whole mailing, from printing to postage, will cost about $2,500.

"One Earth, One Life," the cards read, along with a quote attributed to the Vatican: "Nuclear weapons are incompatible with the peace we seek for the 21st century."

The reverse side of the postcard-like greetings wish the employees a happy new year and explain the study group's stance on nuclear proliferation — that international treaties forbid the development of new bombs and that the "stockpile stewardship" program at Los Alamos flaunts those global agreements.

The cards also invite employees to join the study group as advisers, volunteers or financial supporters.

Stockpile stewardship refers to the Department of Energy's policy of maintaining and repairing the nation's existing nuclear weapons, as opposed to making new ones. The United States hasn't manufactured any new nuclear weapons since the late 1980s when the Rocky Flats Plant near Denver closed.

But according to Mello, the Nuclear Nonproliferation Treaty, which the U.S. ratified 30 years ago, also calls for a gradual reduction and ultimate eradication of nuclear weapons. Stockpile stewardship aims to maintain the nation's nukes indefinitely, Mello said, and much of the program also aims to make changes to existing weapons. Mello thinks such changes actually constitute new bombs, which wouldn't uphold the spirit of the treaty.

Another reason behind the card campaign, the study group's first, is to make contact with the lab that doesn't involve lab management. He describes a somewhat adversarial relationship with both Los Alam-

See **WORKERS** *on* **PAGE 3**

Workers To Get Anti-Nuke Cards

from **PAGE 1**

os lab officials and officials in the Department of Energy, which oversees the lab.

"Some employees have been reprimanded for talking to us," he said.

Lab spokesman John Gustafson said the institution in no way controls what its employees do on their own time and would not block any employees who wanted to join the study group, so long as they don't join as official lab representatives.

Several employees already attend meetings hosted by a similar anti-nukes group in Los Alamos, he said.

"It's an established tradition at the lab," Gustafson said.

A team of 25 volunteers spent last Friday painting a simple circular design on the cards. Some cards, Mello confessed, were ruined in the process, but a good chunk of the lab's employees will still get one.

"We don't want anyone to be disappointed," Mello said.

Paper: The Denver Post
Title: Cost of N.M. lab repairs questioned by watchdogs
Author: The Associated Press
Date: December 29, 2000
Section: A
Page: A-36

LOS ALAMOS, N.M. - Plans to use federal money from the Cerro Grande Fire to build a new operations center at Los Alamos National Laboratory have watchdog groups and local politicians questioning lab motives. The federal government has already released $342 million in cleanup and reconstruction money to the lab. About $500 million has been earmarked for the town where 500 families lost their homes.

"It's really an enormous amount for the lab," said State Rep. Max Coll, D-Santa Fe. "It seems disproportionate to me, but I'm not entirely aware of what damage (the lab) suffered, so I don't really know."

About 40 buildings - mostly portables and trailers - and 8,000 acres were scorched in the fire, which started as a controlled burn by the National Park Service.

Lab officials say much of the $342 million will be spent on actual repairs to the physical damage. About $100 million has been earmarked for landscape changes to prevent floods and runoff.

The spending plan also includes a $20 million emergency-operations center, a lab spokesman said. The lab also plans to spend $10 million for two office complexes that will house about 130 workers.

Another $29 million will be spent on a new "waste management mitigation" and $25 million will be used to replace fire alarm systems throughout the lab.

"Those smoke clouds seem to have had a golden lining for the lab," said Greg Mello director of the **Los Alamos Study Group** in Santa Fe.

Mello says the lab should use one of its existing buildings for an emergency center instead of spending $20 million to build a new one.

Lab officials say their plans have been approved and most of the money will pay for fire repairs.

"Our budget requests were reviewed by the Department of Energy and the Office of Management and Budget and approved by Congress," communications director John Gustafson said.

Author: The Associated Press
Section: A
Page: A-36

Paper: New Mexican, The (Santa Fe, NM)
Title: Letters
Date: December 31, 2000
Section: Opine
Page: F-5

Aglow over implicit agreement on radiation?Dec. 18, at the public open house for the Interagency Flood Risk Assessment Team in Santa Fe, the table manned by the Los Alamos Study Group (LASG) caught my attention. On the table were bags of dried vegetation that Greg Mello, chairman of the LASG, collected on LANL property -- presumably from a contaminated site identified for remediation. A radiation meter registered about 0.3 millirems (mrem) per hour. Mr. Mello presented a bag to James Bearzi, chief of the New Mexico Environment Department's (NMED) Hazardous Waste Bureau, and he told Mr. Bearzi that he had many more bags in his office.

To put this dose into perspective, the recently-published LANL Environmental Surveillance Report shows that the hypothetical, maximally-exposed member of the public received 0.7 mrem during 1999 from all operations past and present of LANL. In a few hours of being near the ``bags'' that night, members of LASG and others in the room may have received higher radiation dose from those bags than did members of the public from an entire year from LANL causes. Certainly they received more dose than if the contamination had been left in place.

Mr. **Mello** is well-versed in radiation from his past job at NMED and his current work with LASG. He clearly does not fear the small radiation doses from the bags and also is not concerned about others receiving such doses from his actions. Implicitly, he is saying that low levels of radiation are not of concern for human health -- a positive, rational and technically defensible statement.

All taxpayers have a stake in seeing that dollars are spent wisely and effectively to clean up radioactive wastes. I hope that we can use the common ground established by our mutual recognition that low levels of radiation are not harmful to move toward a more reasonable approach for clean up and other issues regarding radiation dose. Let's spend our dollars only where they will make a real and positive difference to human health.

Dave Kraig

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LANL workers targeted for peaceful anti-nuke message

12/31/00 LA

ALBUQUERQUE (AP) — An anti-nuke group from Santa Fe is sending New Year's cards to 8,000 Los Alamos National Laboratory employees that encourage them to slow the spread of nuclear weapons.

The hand-painted cards wish the employees a "wonderful new year" and contain a quote attributed to the Vatican: "Nuclear weapons are incompatible with the peace we seek for the 21st century."

Anti-nuke activist Greg Mello, of the Los Alamos Study Group, said the cards will be mailed to the homes of lab employees listed in the telephone book. The mailing will cost about $2,500.

"We want to reach directly to lab employees to let them know we're here, let them know we respect them. Not everyone at the laboratory supports nuclear weapons," Mello said.

The postcards read "One Earth, One Life" and explain the study group's stance on nuclear proliferation — that international treaties forbid the development of new bombs and Los Alamos' "stockpile stewardship" program flaunts such global agreements.

The stockpile stewardship program refers to the Department of Energy's policy of maintaining and repairing existing nuclear weapons rather than making new ones.

The United States hasn't manufactured any new nuclear weapons since the late 1980s when the Rocky Flats Plant near Denver closed.

But Mello said the Nuclear Nonproliferation Treaty, which was ratified by the United States 30 years ago, calls for a gradual reduction and ultimately the elimination of nuclear weapons.

Mello said he believes stockpile stewardship aims to maintain the nation's nukes indefinitely.

Changes to existing weapons under the program actually constitute new bombs, which doesn't uphold the spirit of the treaty, he said.

The New Year's cards invite lab employees to join the study group.

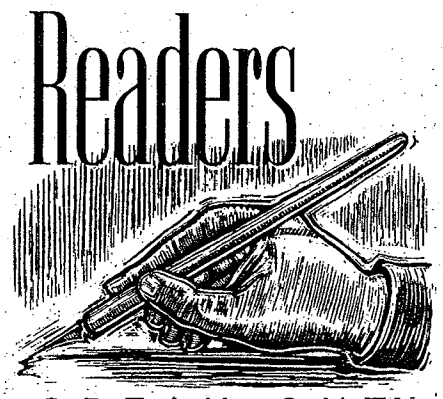
The card campaign, the group's first, is an attempt to reach lab employees without having to go through management, Mello said.

"Some employees have been reprimanded for talking to us," he said.

Lab spokesman John Gustafson says the lab does not control what its employees do on their own time. He says the institution would not block them from joining the study group as long as they didn't join as official lab representatives.

Aglow over implicit agreement on radiation?

12/31/200 TNM



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Dave Kraig
Pojoaque
via e-mail

Accuracy important

As a presenter at the Dec. 18 public meeting of the Interagency Flood Risk Assessment Team, I would like to clarify some statements in the article printed Dec. 19. The article stated that the average levels of plutonium, strontium and cesium in sediments from the Cerro Grande fire are "10 times higher" than the levels found in sediment from the Viveash fire. Actually, a review of our preliminary data indicates that Cerro Grande levels are 1.4 to 3.4 times higher.

Acute (48-hour) and chronic (seven-day) toxicity tests were run on storm water samples using fathead minnows and a small crustacean (Ceriodaphnia dubia). The article stated that samples from Pueblo Canyon were not acutely toxic but showed "chronic toxicity," killing off both the minnows and the crustaceans in seven days.

Actually, in the chronic tests, 70 to 100 percent of the crustaceans died but there was no toxicity measured in the fathead minnow tests. These toxicity tests do not correlate to human health risk, but are a means to measure potential effects on aquatic ecosystems.

A lot of information was presented at the meeting, some of it difficult to understand given its technical content. It would therefore be prudent for *The New Mexican* to verify its information prior to publishing it. We appreciate the opportunity to correct the record on these results. It is important for the public to have accurate information.

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