

LANL budget to increase 9.1 percent

By STEPHEN T. SHANKLAND
Monitor Staff Writer

The estimates of Los Alamos National Laboratory's fiscal 1993 budget are in, showing a 9.1 percent increase in the overall lab budget up to \$1.122 billion dollars.

The lab budget for 1993 is about \$94 million more than the fiscal 1992 budget of \$1.028 billion.

LANL Executive Staff Director Karl Braithwaite and two representatives from the lab's financial division, Peggy Patterson and Williard Lewis, provided the anticipated figures in a briefing today at the lab's Public Affairs Office.

As the three pointed out, they aren't likely to know the actual fiscal 1993 budget figures until the year is over — especially in light of changes

anticipated with the arrival of a Clinton-Gore administration.

Braithwaite predicted that the new administration would favor programs such as environmental restoration and waste management, technology commercialization, and energy research.

On the losing side, Braithwaite said, the lab expects the funding for nuclear weapons research and design to continue to decline.

The number of full-time-equivalent employees at the laboratory will rise from the 7,450 figure of 1992 to 7,600 in 1993, Patterson said.

This figure, however, doesn't include many employees at the lab, including visiting scientists and con-

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tractors like Johnson Controls and Protection Technology, Braithwaite said. The actual number of people at the laboratory is between 11,000 and 12,000, he said.

Defense activities still account for a large piece of the LANL pie. The anticipated \$483 million for defense work in fiscal 1993 is down 5.7 percent from fiscal 1992's \$240 million, but up from fiscal 1991's \$214 million.

Braithwaite said there still is a need for nuclear weapons work to maintain nuclear competence. Nuclear weapons figure prominently in every defense scenario for the United States into the next century, he said.

Braithwaite also said the lab's strategic planning process is developing a document that will show where the lab wants to go — as opposed to where Congress is funding it to go. The document should be ready in about a month, he said.

But as Patterson was quick to point out, many activities under the "defense activities" umbrella aren't,

strictly speaking, research on nuclear weapons.

First, of the \$483 million "defense activities" amount, \$96 million is set aside for "non-traditional" programs such as technology commercialization, nuclear treaty verification, nuclear safeguards and security, and keeping track of other countries' nuclear capabilities. These non-traditional defense activities are up 28 percent from last year's \$74 million.

And even the "core research and design" category — which accounts for \$226 million in the fiscal 1993 budget — contains an increasing amount of environmental cleanup work, budget figures show.

The three spokesmen were unable to present a breakdown of exactly how much money from defense activities programs is being devoted to such environmental work. However, they said the amount is increasing.

Braithwaite said the lab recommends where to spend money, but that Congress is the ultimate allocator. "We can't just take money from nuclear weapons work and put it into non-nuclear work. You go to jail for

that," he said.

Braithwaite said it took two years for one idea to go through Congress and get funded.

Braithwaite said that in order to continue funding for the Los Alamos Meson Physics Facility, the lab had to categorize it as "core (weapons) research and design" instead of its usual category of energy research. Braithwaite said other national programs such as the superconducting supercollider had taken the energy research funds. He said, however, that LAMPF wouldn't be shifting its focus to weapons work.

The fiscal 1993 figures can still change, since money trickles in throughout the year instead of arriving in one lump at the beginning.

Braithwaite predicted that the Clinton administration might reprogram money, shifting it from one program to another.

The lab doesn't have the authority to move funding around this way, he said.

In the overall budget, Braithwaite said, he expects "non-defense funding to offset declining defense funding."

Group protests exclusion from LANL briefing

By STEPHEN T. SHANKLAND
Monitor Staff Writer

The Los Alamos Study Group, a Santa Fe-based group that examines the doings of Los Alamos National Laboratory, protested its exclusion today from a budget briefing at the lab.

Five members of the study group, including Greg Mello and Mary Riskey, came to the lab's public affairs building to attend the briefing, but weren't allowed in. Riskey said the group wanted to document the refusal.

Lab Executive Staff Director Karl Braithwaite said he would be willing to meet with the group. They were still waiting when the briefing was concluded.

The briefing was an attempt to "manipulate and intimidate New Mexico news media," the Study Group statement said.

The group said in a news release. "Only three of the many qualified New Mexico print journalists with demonstrated interest in defense and Department of Energy issues were invited to receive information from senior staff member Karl Braithwaite on the current LANL budget. No television or radio correspondents were included."

Lab spokesman Bill Heimbach

said, "I think there's possibly some confusion about what the session is this morning. It's simply in response to the request of three reporters for some in-depth information on the fiscal year 1993 budget."

"It's not a press conference. It's an honest attempt to fill the request of three news reporters (Stephen T. Shankland from the Monitor, Keith Easthouse from the Santa Fe New Mexican, and John Fleck from the Albuquerque Journal). These three were the only ones that requested the information."

But the group said, in its release, "LASG has repeatedly made requests for up-to-date budget information relating to the laboratory's current and projected activities; requests that have been consistently denied."

Asked if the lab would hold such a briefing for the Los Alamos Study Group if the group requested it, Heimbach said, "We would consider it."

Heimbach said the Los Alamos Study Group "called and asked yesterday (Wednesday) if they could come. We told them that it was a briefing for three reporters. It was going to be only for those three reporters."

Alternate view planned ^{1/8/92}

By EVELYN VIGIL
Editor/Publisher

Only one group plans to offer alternative views to the work conducted at Los Alamos National Laboratory, but if more groups turn out, they will have to share the same

space at the Bradbury Science Museum, a LANL official said today.

Scott Duncan, director of public affairs at LANL, said the laboratory has been negotiating with a Santa Fe organization called the Los Alamos Study Group. The group approached the lab asking for space in the science museum to present an alternative point of view.

The Santa Fe group based its request on a court case in California that allowed Lab Watch to put an anti-nuclear display in the museum at Lawrence Livermore National Laboratory, said spokesman Greg Mello.

The Bradbury Science Museum will occupy about 3,500 square feet of display space when it opens in its new location in downtown Los Alamos early next year. The Los Alamos Study Group is requesting 154 square feet of that space. The group won't have to pay for the space, but it will pay for construction of its exhibits.

"We feel that while the exhibits in the (Bradbury) museum are very good, technically speaking, there is a subtext to the museum which raises a lot of questions," Mello said. "There is the impression conveyed that nuclear testing and development of nuclear weapons is in the interest of national security."

However, he said, times are changing, and the nation is moving away from nuclear weapons and testing. Witness, for example, the fact that the Nuclear Testing Moratorium Act has passed the U.S. House and has 52 co-sponsors in the Senate, he

said.

"National security is defined relatively narrowly by the museum exhibits, we feel. Nowhere is there mentioned the sacrifice of resources necessary to fund LANL's defense work," Mello said. "The tenor of the exhibits suggests that these weapons are simply neat high-tech products. Omitted is any mention of the horror that would be involved in their use."

And the underlying theme, he said, is "the great myth of conquest and control of nature and ourselves through applied science."

"These are some of the reasons we feel it's important to have some alternative displays and to work with the museum folks, who are somewhat apprehensive but a little intrigued...," Mello said.

Duncan said the laboratory has been aware of the court case in California for some time. "We'd been expecting to have some groups coming at us at some point in time," he said.

"One of my great concerns is if we work out a suitable amount of space ... if we worked out a display rack, for example ... then what do I do if the 'Friends of the Great Horned Toad' show up?" Duncan said. "If there were other groups, that space would come out of Mello's space."

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MUSEUM

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Mello said his group hoped to have some exhibits ready for the current museum, but "making the exhibits is not instantaneous," and he doesn't know the exact timetable.

Part of the decision on the timetable will hinge on when the group receives written notification from the laboratory, he said.

Duncan said a letter from LANL Deputy Director Jim Jackson could be sent out by this Friday. Jackson has received information from Duncan and from the lab's legal counsel, and that information must be melded before a response can be drafted.

"Hopefully we'll hear from the lab by the end of the week," Mello said. "If we don't, we'll feel we're being stalled."

"We'll try to get it out of here by Friday," Duncan said of the response, but "There are a couple of things going on at the lab."

Duncan said his only concern is how to make everything work "logistically."

Duncan said he has no problem with offering alternative points of

view because maybe such an approach will make people look at their ideas in a different way. He's still unclear, though, on "what it is about the current museum that upsets people."

"I really haven't gotten an answer," he said.

Before the move to the new location, museum staff members will review the films and the displays to fit with the many missions of the science museum.

The first is "the accurate depiction of historical fact. What happened on this ground 50 years ago," Duncan said, noting that the efforts that ended World War II are legitimately in this category.

"Then we have a depiction of what we are doing today," he said, noting that the laboratory has "a proud past, a fantastic future."

And the third role of the science museum is to help young people develop an interest in math and science in order to bring along scientists for the future, he said.

Duncan said he's not sure what message the alternative groups plan to offer.

Lab Show To Include Opposing Viewpoint

By Tamar Stieber

JOURNAL STAFF WRITER

LOS ALAMOS — By early next year, visitors to Los Alamos National Laboratory's science museum may be getting a surprise.

Somewhere between models of linear accelerators and nuclear reactors — and reproductions of the nuclear bombs that leveled Nagasaki and Hiroshima in 1945 to end World War II — they may find a chart of laboratory "whistleblowers" who spoke out about health and safety violations at the lab.

Behind the life-sized sculptures of Manhattan Project leader J. Robert Oppenheimer and his boss, Gen. Leslie R. Groves, they may find an exhibit charting the economic, environmental and health costs of the arms race.

This is part of the laboratory's agreement, still verbal, with an anti-weapons organization called the Los Alamos Study Group, based in Santa Fe.

The group describes itself as "dedicated to the cessation of weapons development and (to) the conversion of Los Alamos National Laboratory to non-military research, development and education."

The 10-member grass-roots group asked the laboratory for "equal time" in the museum to paint what they believe is a more complete picture of the Los Alamos laboratory, its work and its legacy.

They cite as precedent to the exhibits they're planning a 1985 California appellate court decision allowing a group called Lab Watch to put an anti-nuclear exhibit in the visitor center at Lawrence Livermore Laboratory in Livermore, Calif.

The Livermore laboratory, like the one in Los Alamos, is part of the U.S. Department of Energy's nuclear weapons complex. Both are operated by the University of California.

"The laboratory provides a sanitized view of nuclear weapons," said Study Group spokesman Greg Mello this week. "That's something that deeply disturbs our members."

Mello said the group's exhibits will paint a more complete picture of the Los Alamos laboratory, its work and its aftereffects.

Mello referred to the science museum's 20-minute film documenting the history of Los Alamos. He referred to a shot in the movie, ostensibly of Nagasaki, Japan, after the July 16, 1945 bombing, with an accompanying sound track much like a music box.

"That's bubble gum music in the background," Mello said. "There's not one word of burned bodies or human suffering."

Mello also spoke of the museum's sample glove box — a transparent box with long rubber gloves where plutonium workers stick their hands to handle the radioactive material inside. But the museum's glove box contains large, plastic Lego nuts and bolts in blue, red, yellow and green for visitors to handle with the gloves.

"Those are children's toys, not plutonium," he said.

Museum director John Rhoades

said the contents of the glove box went through a series of changes before the museum finally settled on the Lego toys "as a pragmatic solution to a museum exhibit problem" resulting from breakage of earlier items.

"I'm sensitive to the Tinker Toy issue," he said. "But I don't think he's right."

As to the film, Rhoades said he didn't remember the music accompanying the shot of the bombed city — which he said actually is Dresden, Germany, and not Nagasaki.

Rhoades readily acknowledged that the movie needs some changes. In fact, he said, the museum is outdated in many ways, particularly since the thaw in the Cold War. But that's not the same as a whitewash, he said, noting that an exhibit called "Changed World, Changing Laboratory" is in the works.

"I think he (Mello) was floored when I said, 'It sounds like a good idea,'" Rhoades said.

So Rhoades agreed to "carry the message" to his boss, Scott Duncan, head of public affairs for the laboratory.

Duncan said Tuesday night in a telephone interview that the laboratory will allow the group to exhibit but the details are still to be haggled out, including how much space the group will get.

Mello said he asked for 154 square feet, which he says is proportionate to what the Livermore group got in the smaller visitors center there.

Duncan said, however, that the decision in the Livermore case, "does not compute square foot to square foot."

"Under the First Amendment, we have to give equal time, whatever that amounts to. We'll try to work it out," he said.

However, Duncan said, he doesn't understand the point the Los Alamos Study Group is trying to make.

"It's a historical fact that Los Alamos was home to the Manhattan Project," he said, referring to the code name for the atomic bomb project. "I don't understand what there is to have a counter display about. That's history, that's fact."

Referring to a suggested display about the economic and environmental costs of nuclear weapons technology, Duncan said, "Freedom isn't free. Obviously, there has to have been an investment made by the American taxpayer to provide a deterrent on which this nation has relied."

Duncan also pointed out the Manhattan Project scientists were under pressure to build a bomb to end World War II. They weren't thinking at that time about the environmental ramifications.

Rather than include a such display in the museum, he said, the laboratory will relocate its Environmental Reading Room next to the Bradbury museum, when the museum moves next year from Diamond Drive to Central Avenue.

However, he acknowledged that if people don't ask, they may never get the environmental information.

"Maybe we have to look at that and say, 'How do we do a better job

of explaining that,'" he said.

What still needs to be worked out is what Rhoades described as "gate-keeping issues" — what's to keep other groups from wanting their own displays?

Rhoades said he's also concerned about aesthetics.

"I don't want this to look like the bulletin board of Wild Oats," he said, referring to a natural foods supermarket chain that opened

stores in Santa Fe and Albuquerque over the past year. "Our museum is pretty 'techy.' I don't want them to put posters up."

Rhoades said Mello assured him artists have volunteered to work on the project.

The Bradbury Science Museum gets about 88,000 visitors a year, according to a woman who answered the business office phone late Tuesday afternoon.

LANL official can't fathom exhibit plan

The Associated Press

LOS ALAMOS — A spokesman for Los Alamos National Laboratory said he does not understand the reasoning of an anti-weapons group that wants to place an exhibit at the lab's science museum.

"It's a historical fact that Los Alamos was home to the Manhattan Project," Scot Duncan said, referring to the code name for the program that built the world's first atomic bomb. "I don't understand what there is to have a counter display about. That's history, that's fact."

The 10-member Los Alamos Study Group has asked the Bradbury Science Museum for "equal time" to show its point of view, and the lab has verbally agreed.

The group describes itself as "dedicated to the cessation of weapons development and (to) the conversion of Los Alamos National Laboratory to non-military research, development and education."

Among the museum's exhibits are models of linear accelerators and nuclear reactors, and reproductions of the nuclear bombs that leveled Nagasaki and Hiroshima in 1945, along with life-sized sculptures of Manhattan Project leader J. Robert Oppenheimer and his boss, Gen. Leslie R. Groves.

The group plans exhibits that chart laboratory "whistleblowers" who spoke out about health and safety violations at the lab and that outline the economic, environmental and health costs of the arms race.

The exhibits could be in place by early next year.

The group cited as precedent to the exhibits a 1985 California appellate court decision allowing a group called Lab Watch to put an anti-nuclear exhibit in the visitor center at Lawrence Livermore Laboratory in Livermore, Calif.

"The laboratory provides a sanitized view of nuclear weapons," said Study Group spokesman Greg Mello. "That's something that deeply disturbs our members."

The group said its exhibits will paint a more complete picture of the Los Alamos lab, its work and its legacy.

Museum director John Rhoades said the museum is outdated in many ways, particularly since the thaw in the Cold War.

But he said that is not the same as a whitewash.

He said an exhibit called "Changed World, Changing Laboratory" is in the works.

Duncan said the group will be allowed to exhibit but that details are still being worked out.

Study group debates LANL's role

Nuclear weapon debate accelerates in Los Alamos

7/15/92
By KATHLEENE PARKER
For The New Mexican

LOS ALAMOS — On July 16, 1945, the first atomic bomb was tested at what is now called Trinity Site near Socorro. Days later, Hiroshima and Nagasaki, Japan were leveled by atomic bombs.

On the 47th anniversary of the New Mexico test, the debate over nuclear weapons is accelerating, especially in Los Alamos, where it was developed.

"Los Alamos, at this point in the century, is one of the most important places in the world."

It is on the cutting edge of the arms race," said Stan Crawford of the Los Alamos Study Group, an anti-nuclear organization.

"It can help orchestrate the direction of the national budget in relation to the high proportion of spending on defense," said Crawford, a Taos resident who has authored several books touching on Los Alamos issues.

The weapons debate is being spearheaded by the 2-year-old organization.

"We're dedicated to increasing public dialogue about Los Alamos National Laboratory and the end of the Cold War," Greg Mello, a Santa Fe member of the group, said.

"The Soviet Union is no

longer our enemy. In fact, it no longer exists. It is as if the weapons themselves have taken on a transnational life of their own," he said.

The study group will sponsor a public panel discussion about the future of nuclear weapons at 7 p.m. Thursday night at Fuller Lodge in Los Alamos.

The panel will feature national security experts from LANL and experts on legal issues relating to nuclear weapons. They will discuss, among other things, a test ban treaty being considered by Congress.

The study group also is focusing on LANL's Bradbury Science Museum, where it hopes to install an exhibit. The group has asked for display space at the museum and laboratory officials have said they will arrange it.

The study group takes exception to what it sees as a lack of balance in the museum's handling of nuclear issues, Mello and Crawford said. While the museum focuses in part on the history and technology behind the development of the atomic bomb, it does not offer any exhibits showing the devastation caused by the bomb, they said.

"My reaction (to the museum) I suppose was that I was startled and shocked at the very sanitized presentation of something very dark and complex and something that most people view as very ugly," Crawford said.

But Dan Cash, operations leader at the museum, does not believe the museum's mission is to deal with social issues.

"They are correct in that our display does not address what

happened in Japan. We try to show what the lab's role is technologically," he said.

"We (the lab) did not drop the bomb. That is why we do not have anything here about the consequences of Hiroshima and Nagasaki. We see the dropping of the bomb as the end point of our display," he said.

"Once every month or so, we get a visitor who says, 'Why don't you tell how awful the bomb was?' Well, I think that is pretty obvious," he said.

"We don't put pictures of dead bodies on the walls. That would make this more of a war museum. We kind of designed the cannon. The museum does not tell what the social results are of firing the cannon."

LANL spokesman John Gustafson agreed.

"Hopefully they (the study group) will be able to put something up that will address their concerns," he said.

"The museum focuses on history. History is history, so how can there be a counter view to historical matters? We hope people will come to the museum and judge for themselves," he said.

While the study group has made no firm decisions about what its display will contain, Mello said it will probably include films of the devastation of Hiroshima and definitely a quote by Dwight D. Eisenhower, which in part reads:

"Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed."

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Noted physicist seeks end of arms race

By EVELYN VIGIL
and CHARMIAN SCHALLER
Monitor Staff Writers

The Cold War has ended, the arms race of the past is "totally senseless by now," and the world must confront new issues, noted physicist Hans Bethe told a crowd at Fuller Lodge Thursday night.

Bethe urged the reduction of nuclear weapons to the lowest possi-

ble number, but said, "In my opinion, we should not go to zero."

A small number of nuclear weapons must be maintained because, "We can never be sure that there will never be a rogue country as Iraq was."

"It is essential for the United Nations to have at its disposal enough nuclear weapons to make an attempt by a rogue country useless,"

Bethe said.

Bethe, who sat in the audience, took the podium after a discussion sponsored by the Los Alamos Study Group, a Santa Fe organization described by Greg Mello, one of its members, as an informal organization of friends.

"I think in many ways we ought to be very grateful," Bethe said. "The Cold War has ended. President Bush

and President Yeltsin got together and put the ceiling of 3,500 strategic warheads for each country."

Bethe noted that such an action would have been "entirely impossible" five years ago. It could have happened only after the complete revolution in the Soviet Union and the fact that the reductions were supported by the vast majority of people in both countries.

"You cannot take important steps without having real bases in the opinion of the countries," he said, later asking, "Why do we need nuclear weapons? We don't need what we have now, and we certainly don't need improvements."

The first step should be to reduce the number of nuclear weapons to the lowest possible number, he said. "The next step is clearly to actually

dismantle the weapons," Bethe said. "That is important."

The fissionable material must be removed and made unusable for weapons, Bethe said. The uranium should be reduced to reactor grade. The plutonium poses a greater difficulty.

"In my opinion, in the future we're

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going to need breeders," Bethe said. "We should have some plutonium for breeders."

He suggested the plutonium should be alloyed with uranium so that the plutonium makes up only 15-to-20 percent of the alloy. "You cannot make a weapon out of that," he said.

The material then should be stored in locations as safe as Fort Knox, he said.

Though the major powers came to agreement on nuclear weapons, "I don't see an agreement as yet on tactical warheads," he said. "They have been withdrawn from Europe and ships, but why should there be 10,000 tactical warheads in this country? Surely they should also be dismantled and the material made innocuous."

Decreasing the numbers to about 1,000 on each side isn't enough, he said. "We need to bring in the other admitted nuclear powers — Britain, France and China."

"In the past, the Chinese have said, 'You have too many nuclear weapons. You go first,'" Bethe said. "We have gone first."

Israel is reputed to have nuclear capability, and that country faces a situation much different from that of other countries, Bethe said. "There are enemies all around Israel, and they are in the situation of war," he added. "I hope the election of Mr. Rabin as prime minister will make Israel in the position to negotiate a peace."

"If and when a peace is established with Israel and other Arab countries, then Israel must negotiate with its non-admitted arsenal," he said.

Bethe said he didn't think a test ban was necessary. "It's vastly overrated in its importance," he said.

"I believe the U.S. should declare we should not develop any new weapons. I believe the Russians would follow immediately, and Britain, France and China would follow as well. We don't need a test ban, and we don't need tests. We don't have a really strong enemy anymore. Therefore, making nuclear weapons more sophisticated makes no sense," he said.

He had the same opinion of the Strategic Defense Initiative, commonly called "Star Wars."

"SDI, which never made any sense, makes much less sense now. If Libya and Iraq develop nuclear weapons, they don't deliver them on intercontinental missiles," he said.

"Clearly, this makes Los Alamos without a mission," Bethe said, adding that he was glad a previous speaker said Los Alamos had a lot of different missions. After talking with Los Alamos National Laboratory Director Sig Hecker, Bethe said, he wasn't optimistic, because developing nuclear weapons is Hecker's job. And, Bethe added, these changes won't come overnight. "It takes time to make people aware of them."

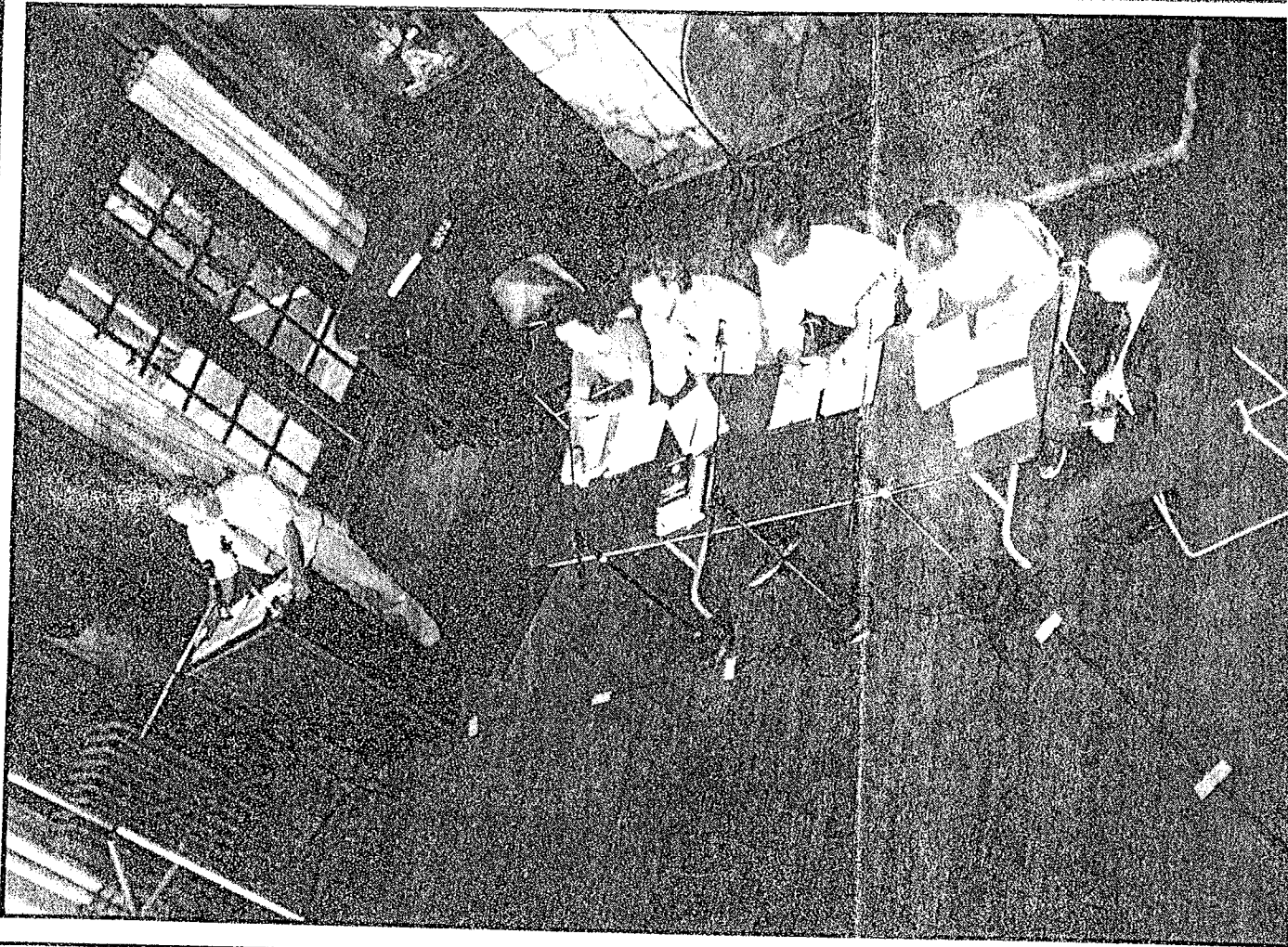
Earlier in the day, Bethe had addressed a LANL audience, outlin-

ing his latest research on supernovae.

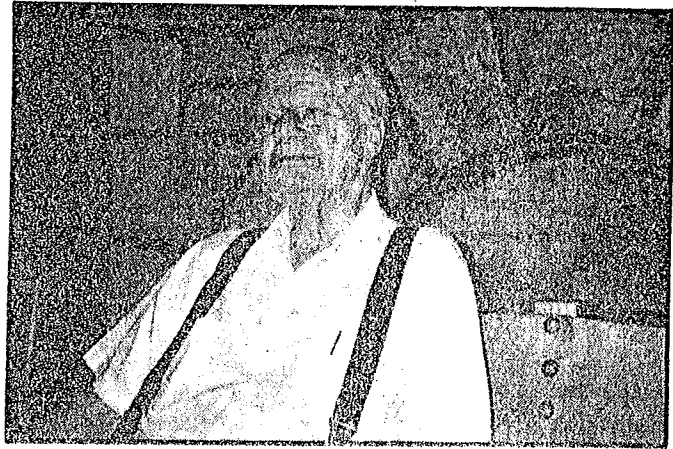
Bethe, an 86-year-old dressed simply in a light green shirt, and pants supported by suspenders, walked slowly to an overhead projector — and then stood for more than an hour, outlining with quiet precision a complex sequence of formula after formula, equation after equation, then answering a number of questions from the audience.

The audience included many young people as well as older scientists. They packed the 182-person-capacity Physics Building Auditorium, and many who couldn't find seats stood at the back of the room throughout Bethe's talk, listening intently to a lecture at the limits of knowledge from a man who has become a legend.

Richard Slansky, who introduced



A crowd of close to 100 people turned out Thursday night at Fuller Lodge to hear a panel discussion on the idea of a United States test ban on nuclear weapons. Above, Roger Morris, far left, moderates the panel. At right, Hans Bethe, internationally renowned physicist, takes a break after addressing the crowd.



EVELYN VIGIL/Monitor

Cut nukes to 100, atomic physicist says

By LAWRENCE SPOHN

Staff reporter

LOS ALAMOS — Forty-seven years after his colleagues detonated the first atomic bomb near Alamo-



Bethe

gordo — and some 50,000 warheads later — Manhattan Project alumnus Hans Bethe says the world can be made safe with as few as 100 of them.

“We should be grateful for the reductions because it would have been entirely impossible five years ago,” Bethe said Thursday of the recent U.S.-Russian agreement to reduce their arsenals to 3,500 warheads each.

“But it is not enough,” said Bethe, who at a white-haired 86 years young remains a giant among scientists.

The Nobel Prize-winning physicist made a surprise appearance to Los Alamos on Thursday to speak at a panel discussion on the future of nuclear weapons, sponsored by the activist Los Alamos Study Group.

Bethe disarmed them all.

“We should just declare that we shall not develop any new weapons,” said Bethe, who headed the theoretical division of the Manhattan Project to build the first atomic bomb in Los Alamos during World War II.

“Obviously, we don’t need a test ban, because obviously we don’t need anymore tests. We have no strong enemy anymore. Making nuclear weapons anymore sophisticated just doesn’t make any sense.

“And SDI (“Star Wars”

space anti-missile program), which never made any sense, makes less sense now: absolutely no sense at all.”

The 10-minute dissertation drew a robust standing ovation.

A stone’s throw away from Los Alamos National Laboratory, Bethe grinned, suggesting “at the peril of my life that this makes Los Alamos without a mission.

“I have not been able to persuade the director that there should not be any further weapons development,” he said. “It’s his business.”

Ribbing aside, Bethe said he was glad to hear the lab’s director for future programs Burgess Laird detail a numbing array of non-nuclear research at Los Alamos, research that lab officials hope will attract private development investment.

Bethe, the first to advocate a complete ban on nuclear weapon testing as the vital link in advanced weapon development, startled some activists by saying it now is “vastly overestimated in its importance.”

Nearly 2,000 nuclear weapons have been exploded as tests, the vast majority by the United States and former Soviet Union.

In an interview, Bethe explained that instead of a test ban, the authority to develop advanced weapons could be taken away from the nation’s three nuclear weapon laboratories.

“What is the future for nuclear weapons?” he asked. “There is essentially none.”

Then, satchel in tow, Bethe slipped out of the lodge and into another familiar haunt, the star-studded Los Alamos night.

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Albuquerque Journal

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Lab Urged To Abandon Nuke Weapons

By John Fleck

JOURNAL STAFF WRITER

LOS ALAMOS — On the 47th anniversary of the Trinity Test, one of the leaders of the Manhattan Project returned to Los Alamos and called for the laboratory he helped found to get out of the nuclear weapons business.

"Why do we need nuclear weapons?" asked 86-year-old Nobel Prize-winning physicist Hans Bethe on Thursday. "I think the United States should declare we should not develop any new nuclear weapons."

On July 16, 1945, Bethe, head of theoretical research for the Manhattan Project, stood atop Compañia Hill, 20 miles northwest of ground zero, to watch the New Mexico sky light up with the world's first nuclear blast.

Thursday, he returned to Fuller Lodge in Los Alamos, to the room where the Manhattan Project scientists held their weekly seminars, to send an impassioned message. Speaking as an impromptu guest at a panel discussion on the future of nuclear weapons, Bethe emphatically argued that an arsenal of only 100 nuclear weapons, a tiny fraction of the 3,500 agreed to by George Bush and Boris Yeltsin, would suffice as a deterrent to nuclear attack.

Bethe, long an advocate of arms control, said the time is finally at hand when nuclear arsenals can be rendered useless.

"We don't have any enemies any more," the escapee from Nazism told an audience of some 70 people, a mix of Los Alamos National Laboratory scientists, community members and peace activists.

Put on by the Los Alamos Study Group, a



Bethe

including Edward Teller, who fled the Nazi advance across Europe and eventually came to America to work on the Manhattan project.

After playing a central role in the development of the atomic bomb, and later returning to Los Alamos to help perfect the hydrogen bomb, Bethe became a leader

peace group, the seminar featured laboratory experts and arms control activists from around the country, discussing the future of nuclear weapons and the laboratory.

Bethe, born in Germany on July 2, 1906, was one of a group of world-class physicists,

among American scientists working to slow the arms race.

"He is the epitome of the scientist who worked to develop (nuclear) weapons and who also worked to restrain the arms race," said California physicist and arms control activist Dan Hirsch, who has worked with Bethe.

Ironically Bethe, in the 1960s a fervent advocate of a treaty banning nuclear testing, said Thursday night he is no more. A test ban is no longer the most important thing, he told an audience that included several leading test ban activists. The most important thing, he said, is for the United States to formally declare it will renounce the development of all new nuclear weapons.

"Once that has been declared," Bethe said

with an impish grin, "we don't need a test ban, and we don't need tests."

To date, the United States has been unwilling to make that declaration.

Laboratory officials say new super-safe weapons are needed to prevent accidental explosions or radioactive contamination. To do that, they say, requires underground nuclear tests.

Bethe, who was in Los Alamos doing some consulting work for the laboratory, acknowledged that he was having a difficult time convincing his hosts of his argument.

"I am not very optimistic, in talking to the very realistic director of Los Alamos, (that I can) make him agree with my statement that there should not be any further development of nuclear weapons," Bethe said, smiling again. "It's his business."

Physicist: Arms race 'totally senseless'

By KATHLEENE PARKER
For The New Mexican

LOS ALAMOS — Hans Bethe, former head of the Manhattan Project's Theoretical Division, returned to Los Alamos Thursday on the 47th anniversary of the Trinity Site atomic bomb test to call for sharp U.S. arms reductions.

"The Cold War has ended. The arms race is totally senseless by now," said the 90-year-old Nobel Prize-winning physicist.

Bethe, who still consults for Los Alamos National Laboratory (LANL), added that arms reduction is supported by the vast majority of people

in the United States and Russia.

Bethe spoke following a panel discussion sponsored by the Los Alamos Study Group, a Northern New Mexico anti-nuclear arms group, on the future of nuclear weapons.

While saying some research should continue in order to make existing nuclear weapons safer, Bethe emphasized that reducing nuclear weapons should take priority.

"We must then actually dismantle nuclear weapons and make the materials (they contain) unusable for nuclear weapons," he said.

"Enriched uranium, in my opinion, should be reduced in concentration to reactor grade. Plutonium may be used

someday for breeders (reactors) but we must make it unusable for weapons," he said.

Bethe said he felt that many people overestimate the importance of an international nuclear test ban treaty.

"I am qualified to talk about this because inside the U.S. government, I was the one who introduced the idea of a test ban," he said.

"(Instead) the U.S. should say, 'We will not make any new weapons.' Then we obviously won't need a test ban," he said.

Citing the improbability that either Iraq or Libya could develop nuclear

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PANEL

Continued from Page B-1

warheads with missiles, Bethe criticized the Strategic Defense Initiative, or Star Wars.

"SDI makes absolutely no sense," he said.

During the panel discussion, anti-nuclear activists said that U.S. nuclear policy has been unduly shaped by LANL and Lawrence Livermore Laboratory because the labs successfully lobbied Congress to halt

arms reduction treaties. They also said that U.S. nuclear policy, especially the bombing of Hiroshima and Nagasaki, was in violation of international laws that prohibit waging war on civilians.

Laboratory officials at the panel discussion declined to respond to the criticism, instead emphasizing LANL's increased focus on non-military studies such as ozone research, supercomputing, and transmutation

of nuclear waste.

Bethe stopped short of calling for total disarmament.

"We should not go to zero nuclear weapons. We cannot be sure there won't be a rogue country like Iraq that might develop nuclear weapons," he said.

"We have to retain a very small arsenal of nuclear weapons as a deterrent, but the future of nuclear weapons is very, very limited," he said.

Panel mulls N-test ban

LA
Monitor
7/17/92

By EVELYN VIGIL
Editor/Publisher

Residents, scientists and visitors filled the Pajarito Room at Fuller Lodge Thursday night — the night of the 47th anniversary of the Trinity test — to debate the merits of a complete ban on nuclear testing.

The discussion panel included two Los Alamos National Laboratory staffers as well as representatives of the Western States Legal Foundation and Frank von Hippel, a Princeton professor and chair of the editorial board of the *Bulletin of the Atomic Scientists*.

Joe Pilat and Burgess Laird, both of the lab's Center for National Security Studies at the lab, discussed the lab's plans and strategies for the future and the contributions LANL has made in the issues of non-proliferation and arms control.

The five-member panel discussion was moderated by Roger Morris, a nationally known journalist based in Santa Fe.

"Most people think that our country's nuclear policy is made in Washington by the democratically-elected Congress and president and that the job of people at Los Alamos and Livermore is simply to carry out this policy. This is, of course, wrong," von Hippel said, in opening the discussion.

"To a large degree, U.S. nuclear-weapons policy is shaped by people at Los Alamos and Livermore and people in the bureaucracy of the Departments of Defense and Energy who come from Los Alamos and Livermore," von Hippel said.

He noted that a test ban became a

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PANEL

(from Page 1)

worldwide cause in 1954 after the fallout from a 15-megaton U.S. Bravo test "rained down on a Japanese fishing boat, the Lucky Dragon, and caused one of the fishermen to die," von Hippel said. "This was an accident and was not repeated by the U.S."

Scientists began looking at the effects of low-level exposure to the population because of fallout from atmospheric tests, he said. While some people were concerned about health effects and long-term issues, Edward Teller "persuaded President Eisenhower that it was essential to continue testing to develop 'cleaner' nuclear weapons," he said.

He outlined three arguments that have been used to maintain testing:

- First, the verification argument, which allowed underground testing because people were afraid the Soviets would test underground and not be detected.

- Second, the reliability argument, which is used by the national labs to continue testing so that the weapons will be reliable, von Hippel said.

"Because of secrecy restrictions about testing results, the debate among the experts within the laboratories on the need for testing for reliability was publicly inaccessible," von Hippel said.

And, third, the safety argument. Bush has committed the United States to test only for safety and reliability over the next five years, von Hippel said. And with the end of the Cold War, the main argument to continue testing is for warhead safety, he added.

Pilat said that the lab's work on nuclear weapons is going to decline. "What used to be the status quo is quickly slipping away. I don't think there will be new nuclear weapons for 10 years," Pilat said. However, replacement weapons will be needed, because current weapons are aging and unsafe. Testing is needed to make sure that the weapons work.

Joe Martz, a chemist at LANL and a member of the audience, said he has proposed that the best way to cut down on testing is by making sure that the weapons work, that they can be reproduced later without testing. This, he said, would work as a deterrent.

John Burroughs, an attorney with the Western States Legal Foundation (WSLF) in Oakland, Calif., argued for a test ban on the basis of international law and the fact that the United States is bound by its treaties.

However, Carson Mark, one of the founders of Los Alamos, took issue with Burroughs' argument by stating that "the reference to international law strikes me as totally unconvincing... this country pays no attention to international law."

When Hiroshima and Nagasaki were bombed, "deterrence wasn't even invented. It was the way we lived them. That the thing was nuclear wasn't particular special."

And, he told Burroughs, "Had you said we should pay attention to international law and get in the habit of paying attention to international law, that would have made a point."

Burroughs agreed. "What we have to do is find ways to live together on this planet," he said.

Jacqueline Cabasso, executive director of the WSLF, emphasized the "absolute need for public involvement in determining the laboratories' futures."

Cabasso noted the new directions at LANL, such as work on the human genome project, AIDS research, and efforts toward economic competitiveness.

Cabasso said these new directions are being developed in secrecy. "The public has to be brought in. The public has to have a say in what happens."

"The word *secret* is way too strong," Laird said, adding that there are many "semipublic forums discussing the role of the national labs.

"We're going to have to come up with a way to get people involved," he said.

Critics call for end to U.S. testing of nuclear weapons

By LAWRENCE SPOHN
Staff reporter

LOS ALAMOS — The United States is becoming a nuclear outlaw in the eyes of other nations because of its refusal to stop testing nuclear weapons, critics said this week in the city where the atomic genie was let out of the bottle.

But scientists from Los Alamos National Laboratory countered that as long as the world has nuclear weapons there must be testing, at least for safety and reliability reasons.

And despite the recent dramatic arms-control developments, they don't expect anyone soon to stuff the atomic genie safely back in its bottle.

"As long as we have nuclear weapons, the laboratory's people will be their stewards," said Joe Pilat of the Los Alamos Center for National Security Studies.

He said that assuming there are no new nuclear weapons, maintaining and improving existing ones still require some testing.

Some designs will become "potentially unsafe as a consequence of age," he warned during panel discussions in Los Alamos Thursday and Friday.

The sessions were conducted by the Los Alamos Study Group, activists who favor control of

Nuke tests sharply reduced but are still continuing

Thousands of nuclear bombs have been detonated in tests since the Atomic Age dawned 47 years ago this month near Alamogordo.

Today, Los Alamos National Laboratory is one of three national nuclear weapon laboratories that do warhead testing in underground holes or caverns. Its current budget for this work is \$53 million.

Scientists generally give four reasons for testing nuclear warheads:

- Assuring reliability of weapons already stashed in the nuclear arsenal or stockpile.

- Proving safety and security improvements in warheads.

- Examining radiation effects of weapon systems in order to develop counter measures, or protection,

against enemy air bursts.

- Demonstrating new weapon designs.

The last reason has all but been eliminated by global political changes that are sharply reducing nuclear arsenals and that have brought new nuclear weapon designs to a halt.

Still, this year the United States has detonated four nuclear warheads at the Nevada Test Site, northwest of Las Vegas. Three of them were Los Alamos shots.

Last year, eight warheads were experimentally exploded at the test site, which has an annual budget of about \$1 billion. Tests have declined dramatically in the last few years from the average of about 30 per year in the late 1960s.

Lawrence Spohn

nuclear weapons.

Jackie Cabasco, director of the Western States Legal Foundation in Oakland, Calif., said that the nuclear-weapon labs' insistence on maintaining a testing capability is equated with

continued weapon development.

She said it is hypocritical for the United States to ask other nations to forgo joining the nuclear club while it insists on retaining nuclear testing, a practice closely tied to advanced

weapon development.

She said that only the United States and Great Britain insist on testing nuclear weapons while dozens of other nations are increasing the pressure for a Comprehensive Test Ban Treaty.

"The United States has become as isolated on the issue of testing as Iraq was during the Gulf War," Cabasco said.

She called on Los Alamos and California's Lawrence Livermore and Albuquerque's Sandia National laboratories to take a leadership role in renouncing testing and nuclear weapons in favor of doing broad-based civilian research and development.

Congress currently is considering a one-year moratorium on testing. Both Russia and France have adopted unilateral one-year test bans.

Professor Frank von Hippel, a Princeton physicist and senior editor of the Bulletin of Atomic Scientists, said he fears that the U.S. hard line on testing could jeopardize democracy in Russia.

Scheduled to testify Thursday before the Senate Foreign Relations Committee, von Hippel said he will warn key senators that the Russian military still fears U.S. nuclear might and sees the testing issue as a critical indicator of U.S. intentions.

"They are really worried about third-generation (nuclear) weapons," he said.

"Ultimately," von Hippel said he will tell the Senate, "the

question we have to answer is this: What is more important to our security — the worldwide anti-nuclear-weapon movement or testing?"

Cold War's End Alters Nuke Debate

Experts at Los Alamos Try To See N-Weapons Future

By John Fleck

7/18/92

JOURNAL STAFF WRITER

LOS ALAMOS — From Fuller Lodge to the J. Robert Oppenheimer Study Center, a debate spilled across Los Alamos Thursday and Friday: What is the future of nuclear weapons?

Framed in the esoteric language of nuclear policy — first strikes and test bans and kilotons of explosive power — the debate brought arms control activists and laboratory officials into a series of sometimes passionate panel discussions on the future of bombs first developed at what is now Los Alamos National Laboratory.

"Why do we need nuclear weapons?" asked Nobel Prize-winning physicist Hans Bethe Thursday evening at a gathering sponsored by the Los Alamos Study Group, a peace group.

It would be an understatement to say there was no consensus on the answer to that question, despite more than six hours of formal and informal discussions.

But the nature of the disagreements demonstrated the way the end of the Cold War is changing how the United States thinks about nuclear weapons.

"In the post-Cold War period, I think everything has changed," said Los Alamos national security expert Joe Pilat.

Gone are the formal, decade-long arms control negotiations between the former Soviet Union and the United States, Pilat said.

And gone are the battlefield nuclear weapons from Europe, the tank killers that military war planners viewed as the first rung on the ladder of nuclear escalation, said John Burroughs, a California arms control activist and student of international law.

Also gone is a substantial percentage of the weapons at the top of that ladder, the intercontinental missile warheads that theoretically would have ended the war planners' battle.

Their demise was the result of arms control steps taken in rapid succession by U.S. leaders and those of the former Soviet states, numerous speakers pointed out.

In short, the entire elaborate framework constructed around the East-West nuclear balance of power during the 40-year arms race has been thrown out the window.

"The terms 'East' and 'West' are virtually meaningless now," Pilat said.

In its place, speakers offered a range of solutions at Thursday night's session and a Friday morning discussion sponsored by Common Ground, a group of laboratory employees.

They ranged from an arsenal of a few thousand weapons to deter future nuclear aggressors, suggested by Los Alamos weapons expert Roy Woodruff, to Burroughs' position that total nuclear disarmament ought to be the ultimate goal.

Never far from the discussion was the related question of whether the United States should continue testing nuclear weapons.

Peace activists, represented on the panels by Burroughs and Jackie Cabasso of the Western States Legal Foundation, argued passionately that a testing halt is crucial to send a message and halt further spread of nuclear weapons.

Los Alamos' position is that testing is necessary to ensure the safety and reliability of the arsenal as long as there are nuclear weapons.

But on this point, Woodruff, former head of nuclear weapons research at Lawrence Livermore National Laboratory in California and now the head of Los Alamos' non-proliferation efforts, diverges from his colleagues.

The widely respected weapons expert said further improvements to nuclear weapons are largely irrelevant to the larger question of the bombs' ability to deter aggressors.

Woodruff said if he were president, "I'd say 'stop.'"

But Woodruff also said he thinks arms control activists' intense emphasis on testing is a case of misplaced emphasis.

Testing is merely a means to an end, he said, speaking to Cabasso after Friday morning's panel discussion and surrounded by a knot of onlookers. The real debate ought to be about the future of the nuclear weapons.

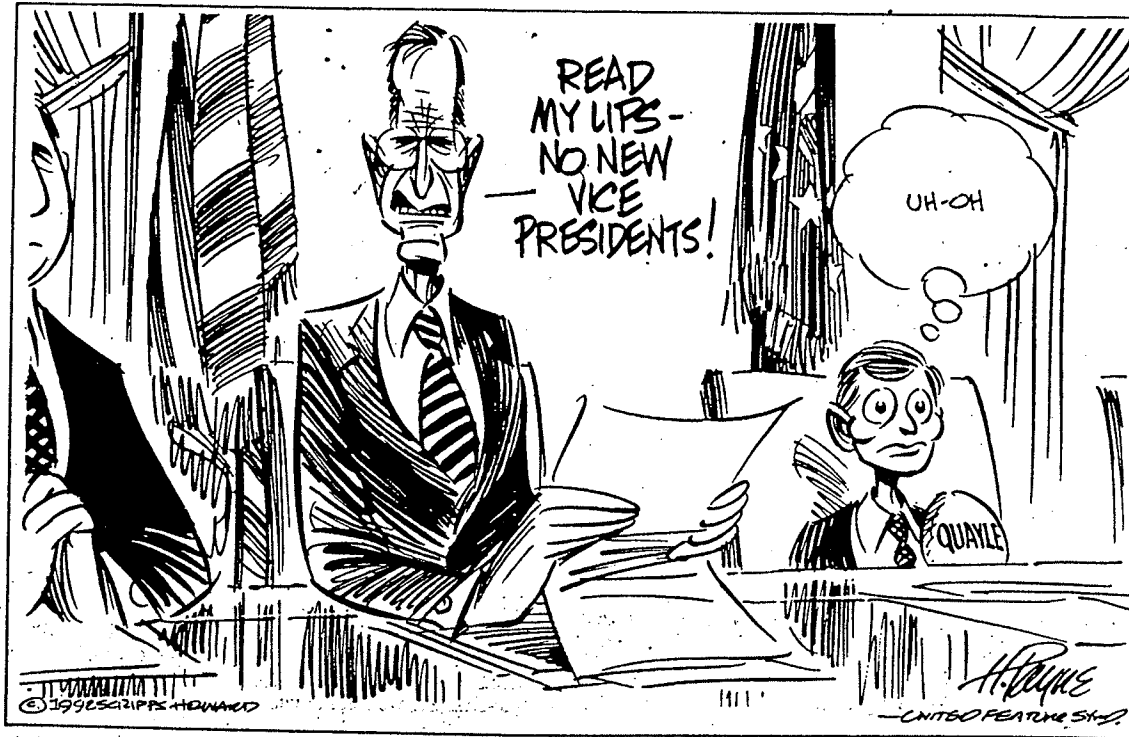
"Nuclear testing is sort of a tail, symbolically, that wags this enormous dog of nuclear policy," Woodruff said.

OPINION

CK EHN 823-3616

The Albuquerque Tribune

7/29 p. A6



EDITORIALS

Get ready for demise of nukes

They're launching nuclear-weapons proposals out there with New Mexico's name on them. But New Mexicans are acting as if they don't much care.

In recent days, for example, Hans Bethe, nuclear scientist who helped invent the first atomic and hydrogen bombs, said during a conference in Los Alamos that the United States and Russia should reduce their nuclear weapons to 100 each.

At the same conference, put on by the Los Alamos Study Group, serious proposals for nuclear test bans were debated.

Those were just the latest of many developments hinting at the demise of the nuclear-weapons business as a mainstay of New Mexico's economy.

Much of our state's economy directly or indirectly depends on the military — much of it on nuclear-weapons research at Sandia and Los Alamos labs.

Proposals to cut way back on nuclear weapons such as Bethe's ultimately could affect New Mexico's economy gravely. Bethe himself said his proposal "makes Los Alamos without a mission."

While that point might be argued, it's clear that a test ban could have a tremendous impact here. Los Alamos currently spends \$53 million a year on testing. The testing in turn supports other missions at the labs from research on safety to designing new weapons. No testing, and funding could drop big-time.

Funny thing is, we expect most New Mexicans agree in principle that reducing the nuclear threat is good. Without taking anything from the contribution the nuclear deterrent made to the end of the Cold War, we certainly believe less threat is better. We like what Bethe and test-ban advocates have to say.

But unless New Mexicans get busy, they will pay more for

exercising their convictions than people from other states. They'll pay with a bum economy.

The labs realize this in principle. Sandia especially is taking steps to retool. For example, it is pushing hard for "technology transfer" — turning over its research to private businesses for use in peacetime products.

But the vast bulk of money at the labs still goes for nuclear-weapons research. For instance, Sandia is struggling to set aside just 10 percent of its budget for tech-transfer. We've got to work harder to turn this ratio around.

The threat to our economy is real. Right now Congress is considering a one-year nuclear-weapons test moratorium. People who want to do the right thing are lining up to support it.

The right thing for New Mexico is to sound the nuclear-attack sirens and work to retool the labs as if our lives depended on it.

Nuclear testing required in new era

By SIG HECKER
and
PAUL NITZE

Nuclear testing will once again be brought into the public spotlight when the Senate considers a testing moratorium. The need for nuclear testing remains controversial and not well understood. In the eyes of many it represents a most powerful symbol of the evil of nuclear weapons. To them, testing is associated with the development of increasingly destructive bombs and, hence, they equate a halt in testing with a safer and better world.

From our experience in arms control and sharing the responsibility for the stewardship of these weapons we see a different side. As in any other high-technology venture, testing is imperative to ensure safety and reliability. The arms race with the Soviet Union is over. In fact, at the recent U.S.-Russia summit, President Yeltsin acknowledged that Russia does not even want parity when the arsenals are dramatically reduced by the end of the decade. The Yeltsin decision reinforces the U.S. role of nuclear protection. That role makes the safety and reliability of U.S. weapons even more important. At the same time, Yeltsin's decision makes the notion that testing drives the arms

race or upsets strategic stability as obsolete as the Cold War itself.

Underground nuclear testing offers the only opportunity to conduct realistic, relevant nuclear experiments that help to ensure the safety, security and reliability of nuclear weapons. Such experiments help preserve the competence and judgment of the scientists and engineers who provide the stewardship of our remaining nuclear arsenals, who will help dismantle weapons and whose skills will be required in case of accidental damage to a weapon or to evaluate or disable a terrorist bomb.

Arguments about preserving technical competence are not politically fashionable. But the tragic accidents of the Challenger space shuttle explosion; Chernobyl nuclear reactor meltdown; and Bhopal, India, chemical plant leak are stark reminders of inadequate testing and questionable technical judgment. Why give up nuclear tests when the consequences of a nuclear weapons accident overshadows those of any other technology on Earth?

The end of the Cold War will speed up the removal of some of the older weapons — those with fewer modern safety features — from the stockpile. However, there will be a tendency to leave other weapons in the stockpile even lon-

ger. Some weapons are 30 years old. It is conceivable that we will see 50-year lifetimes requirements. Since it is now less important to pack more explosive power into smaller packages, weapons designers can make weapons safer in the unlikely event of an accident, or make them more tamper proof against terrorists, and build in greater longevity so they last for 50 years. If such weapons are required in the future, they cannot be developed without nuclear testing.

Many people question the need for nuclear weapons and their testing now that the Soviet Union has collapsed. U.S. nuclear weapons provide a hedge against a possible resurgence of a nuclear threat from Russia or other successor states to the former Soviet Union, which will retain thousands of strategic and tactical nuclear warheads. It is important for the sake of international tranquility that neither Germany nor Japan are tempted to develop their own nuclear forces for self-protection.

U.S. nuclear weapons are needed to dissuade rogue leaders from using weapons of mass destruction and to prevent nuclear blackmail. In the post-Cold War era a smaller, but safe and reliable U.S. nuclear arsenal will serve to discourage the proliferation of nuclear weapons.

The nuclear ambitions of such countries as Iraq, Libya or Algeria are not driven by the U.S. arsenal nor the fact that we test, but by strong political motives or regional security concerns.

Some nations such as Mexico have objected to U.S. nuclear testing in conjunction with the Nonproliferation Treaty discussions. Their objections are obsolete now that the arms race with the Soviet Union is over and the principal purpose of U.S. nuclear tests is to ensure the safety, security and reliability of weapons. The number of tests in recent years has declined sharply to only six this year.

So long as U.S. security interests are served by nuclear weapons we should ensure their safety, security and reliability and maintain a competent scientific work force to oversee them. A small number of tests is necessary to serve these continuing needs so that the end of the Cold War does indeed result in a safer world.

• Sig Hecker is the director of Los Alamos National Laboratory. Paul Nitze is diplomat in residence at Paul Nitze School of Advanced International Studies, Johns Hopkins University, Washington, D.C., and former ambassador to Intermediate Range Nuclear Forces Treaty Negotiations.

Time has come to stop nuclear tests

By GREG MELLO
Los Alamos Study Group

The first nuclear test in the Jonado del Muerto 47 years ago this month was, in many ways, the original defining ritual of the Los Alamos community. Since then, the development of new nuclear weapons has been the central mission, the *raison d'être*, of this laboratory, with nuclear testing as its core ritual. It is only natural that the ending of the East-West confrontation should bring uncertainty to Los Alamos. It is also understandable that the underlying assumptions that drove the cold war are now brought forward again to explain why Los Alamos should not change.

Outside the nuclear weapons fraternity, it is widely appreciated that spokespersons like Dr. Hecker are advocates for their institutions, battling for scarce federal dollars with whatever arguments they can muster, no matter how far-fetched. At this point, no one really expects Dr. Hecker to assign value to the various issues surrounding the future of nuclear weapons without reference to employment levels at LANL. And how could he? From within the nuclear weapons establishment, the first principal of national security is the security of nuclear institutions, including and especially the labs.

Through the years, the reasons solemnly

given to continue testing have changed. Now we are told, and with a straight face too, that we must test into the indefinite future to improve weapons safety, security, and reliability. Those who make this argument must answer the embarrassing fact that, as revealed in a recent Congressional briefing, only one out of the 10 tests scheduled for the next 18 months is planned strictly for these purposes. Apparently we are improving the safety, security, and reliability of new weapons.

In any case, safety tests, whether conducted on new or old weapons, aren't really for "safety," as the term is ordinarily understood. They are to ensure that the safety mechanisms added haven't decreased the enormity of the blast. There are simple solutions to the few remaining "safety" questions which do not require nuclear testing. Warheads containing insensitive high-explosive, for example, can be substituted for the current warheads on Trident submarines. In short, the safety issue has been blown all out of proportion. It's a kind of warm and fuzzy word, which no one can oppose, that ought to be good for a few billion dollars more.

In Dr. Hecker's recent column in the Newsbulletin, written with Paul Nitze, he asks: "Why give up nuclear tests when the consequences of

a nuclear weapons accident overshadow those of any other technology on earth? Surely Dr. Hecker remembers that a multimegaton hydrogen bomb was inadvertently released from an airplane over Kirtland Air Force Base in the 1950s, an accident in which the plutonium-containing primary exploded, without nuclear yield, directly adjacent to an urban area. The comparisons he draws between such an accident and Chernobyl or Bhopal seem like rhetorical flourishes.

As for reliability, few tests are done for that purpose — less than 3 percent between 1970 and 1988, according to the Center for Defense Information. Dr. Hecker asserts that, with fewer weapons, more testing is needed to be sure they are reliable. But Roy Woodruff, former director of nuclear weapons design at Livermore and now the chief of non-proliferation and arms control efforts here, described this argument as "fallacious" in a forum at LANL earlier this month. Reliability of simple weapons, kept for deterrence purposes, and remanufactured as needed, is just not in question. The long-term reliability of poorly-tested new designs might be. The bottom line is this: if we want nuclear weapons as a deterrent against attack, our current stockpile is more than adequately reliable and we don't need to test. If

we want to develop new weapons, we need to test.

This entire argument is framed with the weapons themselves as the reality of reference. We can restore humanity to the reliability question by returning to where we went wrong. We have adopted reliability of a warhead as our objective — an objective accomplished decades ago — when our original concern was to reliably insure that the United States isn't attacked. It is this underlying reliability question that we should be talking about. The evidence shows that continuing our testing program may strengthen the Russian military and nuclear establishments, as well as make strengthening the global nonproliferation regime more difficult. Without a testing ban, China will continue to optimize its arsenal. It's not whether the weapons are safe, it's whether we are safe. Making our weapons safer by the most circuitous path, namely nuclear tests, could make us less safe, not more.

• Greg Mello is a member of the Los Alamos Study Group, a Santa Fe-based organization seeking to foster dialogue on questions relating to the future directions of Los Alamos National Laboratory.

7/30/92 Los Alamos Monitor

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* Greg Mello is a member of the Los Alamos Study Group, a Santa Fe-based organization seeking to foster dialogue on questions relating to the future directions of Los Alamos National Laboratory.

Editorials

The Whole Story

A decision to expand the exhibits at Los Alamos National Laboratory's Bradbury Science Museum to include some of the down side of nuclear weapons makes a world of sense. If handled properly, the addition could give museum visitors a broader picture of the country's nuclear experience.

The Los Alamos Study Group, a small, Santa Fe-based organization, recently received verbal approval from the lab to present an exhibit charting the economic, environmental and health costs of the arms race. The details of the agreement, and the exhibit itself, remain to be hammered out.

Museum director Bob Rhoades is wise to stress that whatever the Los Alamos Study Group develops must be up to par aesthetically. The lab is also at work on a new exhibit of its own, "Changed World, Changing Times," which will reflect the changes precipitated by the end of the cold war.

The museum, which draws 88,000 visitors a year, does a fine job of explaining in everyday language the work done at the lab — at least the work that was done until the end of the arms race. The museum also contains a wealth of scientific information and a compelling history that explains the birth of the atomic bomb and the mood of the nation during and after its development.

Even without the "alternative" exhibit and the "Changing World" focus, the Bradbury Museum is well worth a visit for the scientific and historical understanding it provides to the earthshaking work done at the lab.

The time is ripe to retire Dr. Strangelove

Greg Mello



Commentary

On August 3, the Senate voted, by a veto-proof 68 to 26 majority, to declare a nine-month moratorium on nuclear weapons testing.

In so doing, the Senators joined their colleagues in the House, who had previously called for a one-year moratorium. President Bush has promised to veto any bill with a testing moratorium attached, and so the passage of this bill is not yet assured. The nuclear weapons lobby is working overtime to weaken or kill this bill, which has the potential to end the development of new nuclear weapons by the United States — and to save taxpayers tens of billions of dollars.

All the other nuclear powers — with the exception of the United States and our client Britain — have either stopped the development of their arsenals or pledged to stop when we do. Against a chorus of protests from almost every nation on earth, the United States stands isolated in its insistence on testing nuclear weapons — and on its prerogative to use them in a first strike if desired.

Nuclear weapons under development, you ask? But isn't the arms race over? The quantitative arms race is indeed over, but the *qualitative* push for new weapons continues. The nuclear weapons development budget of Los Alamos National Laboratory

is up 16 percent over last year, and the position of the Lab, as well as of the Bush Administration, is that nuclear weapons development must continue, and testing must go on as long as we have nuclear weapons.

The new nuclear weapons now being conceived and developed at LANL are primarily for use against non-nuclear adversaries and include an earth-penetrating warhead to destroy deeply buried command posts, an enhanced electromagnetic radiation warhead to knock out an adversary's defenses, a precision-guided "micro-warhead" that can be guided to bunkers in cities, a low-yield warhead for theater missile defense, as well as advanced "third-generation" nuclear weapons which can concentrate and focus their destructive energy in a specific direction. It's important, Pentagon documents stress, to develop weapons which can actually be used, and which are, therefore, credible threats.

Brief descriptions of these new weapons can be found in LANL's *Institutional Plan*, a document which makes very clear the LAB's intention to maintain its nuclear weapons programs at current levels for many years. How these new weapons are to be used can be found in the top-level Pentagon report entitled, "the Role of Nuclear Weapons in the New World Order," a chilling vision of global nuclear domination that is available from our office.

Earlier this month, the Bush Administration claimed that henceforth the Department of Energy will test weap-

ons only to assure their safety and reliability. What President Bush didn't say, however, was that they will be testing primarily the safety and reliability of new weapons, as was revealed in a Congressional briefing recently. Only one out of ten planned tests is being designed primarily for safety or reliability of existing weapons.

Actually, such safety tests, whether conducted on new or old weapons, aren't really for safety," as the term is ordinarily understood. They are to ensure that the safety mechanisms added haven't decreased the enormity of the blast. In any case, there are simple solutions to the few remaining "safety" questions which do not require nuclear testing.

As for reliability, few tests are done for that purpose — fewer than three percent between 1970 and 1988. The Administration asserts that with fewer weapons, more testing is needed to be sure they are reliable. But Roy Woodruff, formerly director of nuclear weapons design at Livermore and now the chief of non-proliferation and arms control efforts at LANL, described this argument as "fallacious" in a forum at LANL earlier this month.

Our nuclear testing plans are being carefully watched in Russia, China, and elsewhere. The time has come when LANL security and national security are on opposite sides of the fence.

Greg Mello of Santa Fe is an environmental engineer currently working for the Los Alamos Study Group.

The Albuquerque Tribune
11/17/92 p. A11

Activists call for lab firings

Anti-nuclear activists in Santa Fe today called for the "immediate" removal of Los Alamos National Laboratory Director Sig Hecker, as well as the lab's top managers.

Greg Mello and Lis Oberteuffer contend the lab's current leadership is out of touch with global issues that should be dramatically changing the nuclear weapon mission of the lab.

They said the current Los Alamos team is incapable of directing the lab in a transition to civilian research. The lab and the Department of Energy continue to see Los Alamos primary research mission as nuclear weapons.

"This is not personal. These are good people," Mello said. "But no matter how good of managers they may be the lab cannot make a shift out of the

Reagan-Bush mentality with them at the helm."

Mello and Oberteuffer are authors of an independent report that was issued today by Concerned Citizens for Nuclear Safety. It is highly critical of the lab's continued emphasis on nuclear weapon research in the aftermath of the the Cold War.

But lab spokesman Bkll Heimbach said Hecker serves at the pleasure of the University of California Board of Regents, which manages the lab for DOE.

He said that it is the Concerned Citizens for Nuclear Safety that is "out of touch" and "short-sighted" in not considering the large number of successes the lab has accomplished under Sig Hecker since 1986.

Group warns Los Alamos to

By LAWRENCE SPOHN

Staff reporter

A Santa Fe nuclear activist group today issued a report challenging Los Alamos National Laboratory to foresake its historic role as the nation's prime nuclear weapons lab in favor of a peacetime mission.

"Los Alamos has been clinging to the programs, priorities and management culture of the past," said Greg Mello, one of the authors of "The Conversion of Los Alamos National Laboratory to a Peacetime Mission: Barriers and Opportunities."

"If LANL continues to do so, it will be left behind in the competition for new civilian research dollars," warned Mello, who wrote the report along with Lisa Oberteuffer for Concerned Citizens for Nuclear Safety.

Los Alamos spokesman John Webster, however, reiterated Los Alamos Director Sig Hecker's frequent statements that the lab must retain its nuclear competencies and warhead stewardship as long as nuclear weapons exist.

While the lab has no new weapons on the drawing boards, it believes existing warhead designs can be made safer and more reliable. Some have argued that in a world of fewer warheads, the nation must be able to rely absolutely on its nuclear arsenal for deterrence.

"It's awfully hard to comment until we actually see the report," Webster said.

Both Mello and Oberteuffer are members of the Los Alamos Study Group, a Santa Fe organization that analyzes the lab. The work was funded by the Frost Foundation of Colorado.

It blasts Los Alamos and Department of Energy plans to diversify the lab's research agenda "by simultaneous promotion of its civilian and nuclear weapons missions."

The authors contend that this approach is doomed, is undermining science at Los Alamos and actually might result in the lab becoming one of the nation's primary centers for nuclear materials and weapons manufacturing.

The report suggests that if the

lab and DOE were to transfer its nuclear weapon testing energy and funds to nuclear nonpro-

liferation work and civilian research, the lab would be in an increasingly improved position

quit weapons work

to compete for limited civilian research and development money.

Mello says that nuclear weapon design and testing, to which more than half of the lab's budget is devoted, "is now an industry in rapid decline. It is little more than an albatross that will condemn LANL to smaller and smaller pieces of the budget pie."

The authors contend that Los Alamos' crowning achievement, the development and testing of the first atomic bomb, actually made the United States "less rather than more secure" and that current thinking at the lab does not reflect the growing importance of economic security in the changing world.

The report offers three alternative scenarios to the lab's essentially static five-year plan. While the lab anticipates continued, roughly level funding for nuclear weapon research, the report options would emphasize research in nuclear weapon nonproliferation and civilian research.

Mello reported that Los Ala-

mos scientists he interviewed, as well as Hecker himself, see the Los Alamos plan as impractical and unrealistic in expecting continued level funding and support of lab programs. Hecker is anticipating 10 to 15 percent annual reductions.

But Stroud acknowledged that 1992 and 1993 budgets proposed and approved by Congress actually closely reflect the Los Alamos budget projects and the continued emphasis on nuclear weapon research.

While both men acknowledged that change will require overcoming policy established in Washington, they said Los Alamos has been a primary voice in that policy and that the lab must first be prepared to change before it argues its case in Washington.

Regarding the possibility that Los Alamos would become a weapon production facility, Mello warned, "It is likely to happen if the laboratory does not take a firm stand."

Peace group wants changes at laboratory

4/18/92
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By STEPHEN T. SHANKLAND
Monitor Staff Writer

A New Mexico environmental and peace group has released a study offering scenarios for the future of Los Alamos National Laboratory and criticizing its technology transfer abilities.

The study, entitled "The Conversion of Los Alamos National Laboratory to a Peacetime Mission: Barriers and Opportunities," presents alternate plans for the future.

The report was written for the Concerned Citizens for Nuclear Safety by Greg Mello and Lisa Oberbauer from the Alamos Study Group — two groups often opposed to laboratory policies.

"LANL's defining achievement, the successful test of a nuclear weapon, made the United States less, rather than more, secure. Now, with the end of the Cold War, LANL's current priorities are misaligned with the nation's genuine security needs," the abstract of the report said.

But lab spokesman Bill Heimbach said, "I think the report is superficial. It's essentially flawed because it uses out-of-date information to reach its conclusions, and the authors have inaccuracies" in budget data.

The study was offered as an impetus to change. It is "conspicuous to those ... outside ... that the lab hasn't articulated a clear vision of the future. We're inviting them to do that," Mello said in an interview.

"We understand this isn't the last word on the subject, but we're asking the lab to do better," said Mello.

The study outlines four future plans for LANL.

"We don't indicate which alternative future we would like the best," Mello said.

• The first plan, "LANL Zero," is the lab's institutional plan, "corrected for budgetary optimism," the abstract said.

"LANL Zero is a lab without a coherent vision, since the missions it proposes are incompatible," the report said.

"Instead of enhancing national security, LANL Zero actually undermines national security," the report said.

• The second scenario is taken from a plan formulated by Rep. George Brown, D-Calif., chairman of the House Committee on Science, Space, and Technology.

The Brown plan calls for a consolidation of work at Lawrence Livermore, Sandia, and Los Alamos, the three nuclear weapons labs.

In Brown's plan, LLNL would become the focus for civilian technology; LANL would become the Los Alamos National Defense Laboratory and the focus of nuclear weapons research, design, and possibly production; and Sandia would be halfway between — 50 percent civilian research and 50 percent weapons research.

This consolidation would save \$1 billion, Brown said.

Also, in the Brown plan, LANL (and the Department of Energy at large) would internally downsize its nuclear weapons budget 20 percent each year for four years. Ultimately, the budget would be 40 percent of today's.

Brown said this downsizing would save \$1.5 billion that could be redirected toward civilian technology investment.

• "LANL Two," proposes a "Los Alamos Critical Technology Laboratory ... that reflects a national commitment to redirecting defense R&D toward civilian missions," the report said.

The plan calls for an internal tax at the lab, revenues from which would go toward civilian research.

• Finally, "LANL Three" proposes a "Los Alamos Disarmament Laboratory," in which the lab would "focus on security issues" rather than tech transfer, Mello said. The lab would concentrate on an "inversion" of its former national security policy.

Mello said national and global security now shows that. "The best role for the lab is in dismantling (of nuclear weapons), disarmament, non-proliferation and verification of arms control agreements. In short, dealing with the nuclear Frankenstein that had its origins in the Manhattan project."

The plans "won't cost jobs," he added. "All our plans call for keeping the lab almost the same size as it is now."

And of the current LANL efforts to shift toward civilian technologies, Mello said, "We're not impressed."

The lab is held back by a number of factors, according to the report, notably an environment of secrecy.

"LANL as a whole is not very competitive because of the barriers that exist," Mello said. Secrecy "hurts the lab when they try to enter the public arena."

The report said the lab's shift toward technology transfer is hampered by other factors, including: LANL's location; LANL, DOE and University of California management; uncertain national technological and industrial policies; and problems with cost-effectiveness.

LANL management is criticized in the report for lacking in leadership and accountability, adding to research costs, and maintaining a "culture of intimidation." It should

be replaced, the report said.

Heimbach said the report had inaccuracies and errors that could have been avoided if "the authors of the report had done their homework."

Up-to-date budgetary information was available upon request, Heimbach said.

And the report's criticism that the lab is clinging to obsolete ideologies is contradicted by the lab's expanding program working with Russian scientists on nuclear weapons dismantlement and environmental cleanup, he said.

"Whether you believe it or not, I think it's a big mistake to presume nonproliferation is not one of the most important things we do," Heimbach told The Associated Press.

He added the proposed new University of California management contract includes the oversight and academic freedom the CCNS report is seeking.

The head of the lab's Industrial Partnership Center is the industry representative the report seeks, he said.

He also told The AP the laboratory has entered into \$70 million worth of research and development agreements and has numerous licensing agreements, patents and other joint agreements primarily in civilian research.

LANL behaving like Cold War still on, report says

By KEITH EASTHOUSE
The New Mexican

11/18/92

Despite the end of the Cold War, Los Alamos National Laboratory is clinging to its nuclear weapons mission and is not making a strong enough commitment to non-weapons work, according to a report released Tuesday by a local watchdog group.

One of the report's authors said at a news conference in Santa Fe that current top-level managers at the lab — including lab director Sig Hecker — need to be replaced before the lab will make such a commitment.

The report by Concerned Citizens for Nuclear Safety said that unless the laboratory diversifies into non-weapons work, it could become obsolete — or forced into becoming the Energy Department's central plutonium storage and processing facility,

a role that had been performed by the now closed Rocky Flats plant outside of Denver.

Laboratory officials, who have been asked by DOE to explore the potential of taking over some of Rocky Flats' plutonium responsibilities, have repeatedly expressed opposition to serving as a replacement for Rocky Flats.

"If (LANL) takes over production responsibilities for nuclear weapons, it could mean the decline of the laboratory as a respectable institution," said John Stroud of CCNS.

Lab spokesman Bill Heimbach said the CCNS report, which was based mainly on lab documents and interviews with lab personnel, contains "the same old anti-nuclear rhetoric that everybody is tired of."

Heimbach defended top management at the lab, including Hecker,

saying the report ignores several accomplishments the lab has made in the past year or two toward making the switch to non-weapons work.

He also criticized the report for relying on out-of-date budget figures culled from the laboratory's five-year institutional plan, which was released last October and written several months before.

"That report was written before the end of the Cold War, so it's misleading to focus on it," Heimbach said.

Greg Mello, who wrote the CCNS report, said the institutional plan was used because it contained the only information available on the laboratory's budgetary plans for the future.

Mello said the budgets forecast for the next five years are essentially "business as usual," with the nuclear weapons research and development budget accounting for more than half

of the lab's \$1.1 billion budget.

Mello proposed several alternative budgets that would slash the size of the nuclear weapons program and increase funding in other areas, such as in nuclear non-proliferation work.

Heimbach said there have been shifts in emphasis in the nuclear weapons budget, such as devoting a large portion to environmental analysis and clean-up work. He also said the work force involved in the nuclear weapons research, development and testing program has shrunk by 30 percent during the past five years.

Mello's report, while arguing that the lab must give higher priority to non-weapons works, cites several barriers to making such a transition, including LANL's remote location and large bureaucracy.

Cold War Los Alamos To Decline, Groups Say

By John Fleck 1/13/92

JOURNAL STAFF WRITER

Los Alamos National Laboratory, by clinging to its Cold War nuclear weapons mission, is headed for economic decline, according to a study two New Mexico peace and environmental groups released Tuesday.

The laboratory can reverse that decline by realizing the decreasing importance of nuclear weapons and focusing instead on civilian research, according to the study, written by Greg Mello and Lisa Oberteuffer of the Los Alamos Study Group.

The five-month study, which provides the most detailed outside analysis of laboratory operations since the end of the Cold War, was funded by Concerned Citizens for Nuclear Safety of Santa Fe.

In a news conference Tuesday, Mello acknowledged that some of the impetus for successful change at Los Alamos must come from Congress and the administration. But Los Alamos also must undergo a fundamental change itself, with new managers who are more accountable and more experienced in industrial research, the study said.

That would require laboratory Director Sig Hecker to step down, Mello said.

Hecker, through a spokesman, declined comment.

Citing publicly available laboratory budget data, Mello concluded that Los Alamos expects its future to be based largely on nuclear weapons research.

"The laboratory is not yet embracing the changes that are appearing on its doorstep," Mello said.

Los Alamos spokesman Bill Heimbach disputed that contention, saying the budget numbers Mello used are outdated.

"They based many of their premises on year-and-a-half old data," Heimbach said.

But he acknowledged that the laboratory and the Department of Energy have refused to release more current budget documents to the environmental groups and the news media, despite repeated requests.

In the report, Mello and Oberteuffer sketched four scenarios for Los Alamos' future:

- A baseline budget, continuing current emphasis on nuclear weapons research.

- A "Los Alamos National Defense Laboratory," patterned after a congressional proposal to move nuclear weapons work from Lawrence Livermore National Laboratory in California to Los Alamos.

Cold War Lab Faces Decline

CONTINUED FROM PAGE 1

Los Alamos would be in charge of making and designing bombs.

- A "Los Alamos Critical Technology Laboratory," in which the nuclear weapons budget declines steeply and the lab shifts to civilian research critical to the nation's economic competitiveness.

- A "Los Alamos Disarmament Laboratory," in which the budget for nuclear weapons declines most steeply, while money for arms control work rises rapidly.

Under each scenario, the laboratory's budget by 1997 would be about the same as its current \$1 billion level. But under the budgets based largely on nuclear weapons work, Los Alamos would be stuck with an economic base built on a dying industry, the report's authors contend.

With a conversion to civilian and arms control research, they con-

tend, Los Alamos would be building a base on which the laboratory could thrive.

"Fundamentally, what is holding LANL back is its addiction to nuclear weapons R&D (research and development)," the authors wrote. "Nuclear weapons development is now a dying business which needs to be broken apart to liberate the talent and attention of the lab to new problems."

Heimbach said the report's authors did not give the laboratory enough credit for work now being done to expand into civilian research and development.

The laboratory currently has 27 cooperative research agreements with private firms, worth about \$70 million over the next three years. While that is only 2 percent of the lab's budget, Heimbach said it is nevertheless evidence that progress is being made.

Los Alamos strikes back at group's critical report

By **LAWRENCE SPOHN**

Staff reporter

~~1/5/92~~ 1/19/92 Tribune

Los Alamos National Laboratory blasted a report critical of the lab's future by the Concerned Citizens for Nuclear Safety as "self-serving" and "selective."

They say the critics have deliberately ignored the lab's efforts to broaden its research agenda to pursue civilian research while still maintaining its core nuclear weapon responsibilities.

The Los Alamos Study Group released the report, "The Conversion of Los Alamos National Laboratory to a Peacetime Mission: Barriers and Opportunities," for the citizens group Tuesday in Santa Fe.

They called for lab director Sig Hecker's removal, as well as the top managers at lab, whom they said are out of touch with global military and security changes. They said the leaders are incapable of directing change because nuclear-weapon research spawned their Cold War careers.

Through a spokesman, Hecker said Wednesday he has no intention of stepping down.

And the report's description of Los Alamos managers as "the military mafia" is unfair and "bogus," said Scott Duncan, director of public affairs.

Among the evidence of change ignored by the study, lab officials cited:

- Twenty-five Cooperative Research and Development Agreements signed during the last year between the lab and companies interested in collaborative commercial research. The agreements are valued at about \$70 million, with about half in each case coming from the private partner.

- Fourteen licensing agreements issued for products in the field of superconductivity alone.

- Twenty-five spin-off businesses that are focused on ideas and products that originated at the lab.

- Eighty-seven commercial patents issued on laboratory work in recent years.

RIO GRANDE SIERRAN

NEWS OF THE RIO GRANDE CHAPTER
SIERRA CLUB • NOV./DEC. 1992



Los Alamos' War on the Environment

DOE Contemplating New Plutonium Role for Lab

by Greg Mello

Mesita del Buey is a smallish mesa of the Pajarito Plateau, bounded by the intermittent stream of Pajarito Canyon on the south and by Canada del Buey on the north. Near its southeastern edge lies a large Pueblo ruin called Tshirege. The Pajarito stream supplied water for the people who lived here, and water can still be found in the cattail marsh just upstream from the ruin.

Tshirege lies behind a Department of Energy (DOE) fence. Just to the west is an active radioactive waste landfill, one of the largest in the nation, made up of pits typically 600 feet long that are shoehorned into every available spot on the mesa. In the soulless argot of Los Alamos National Laboratory, this place is called "Area G." Into these pits, and the shafts that lie between them, an estimated 7 million cubic feet of radioactive waste have been dumped. Perhaps another 5 million cubic feet of radwaste lie in other LANL disposal sites.

Transuranic wastes were irretrievably dumped at Area G until 1971; since then most (but not all) of the plutonium-bearing waste has been stored in drums buried retrievably in the tuff, or in tentlike temporary buildings. In a recent random inspection of 100 out of about 16,000 plutonium-containing drums, several were found to have been perforated by corrosion.

Mixed fission products from Los Alamos reactors (aka high-level waste), mixed activation products, tritium-bearing wastes, even entire buildings—all are buried at Area G. *And radioactive waste is still being buried*, at a rate of roughly 180,000 cubic feet per year.

While a 20-year, \$2 billion investigation probes 2200 other potentially-contaminated sites in Los Alamos, the trucks still roll to Mesita del Buey. In all likelihood, any radioactive soil cleaned up from these other sites will simply be re-interred at Area G.

(Continued on page 5)

Los Alamos

(continued from front page)

As of this writing, the New Mexico Environment Department is preparing a significant enforcement action against LANL for violations of the Resource Conservation and Recovery Act. LANL has been in chronic violation of the Clean Air Act and the Clean Water Act as well. Some 149 sources lack monitoring for radioactive air emissions, and LANL's known liquid waste outfalls, also some 150 or so in number, are now operating without a permit.

The Lab typically operates within a regulatory labyrinth; the complexity and sheer magnitude of environmental issues at LANL severely taxes the resources of state and federal regulators. And the state has always been reluctant to apply environmental laws at face value to facilities as large as LANL.

Most of the plutonium waste entering Area G originates a couple of miles to the west at Technical Area 55, at what used to be called—in a less PR-conscious time—the Plutonium Processing Facility. TA-55 is now the best place to process plutonium anywhere in the nuclear weapons complex, and has produced enough plutonium for 300 or more nuclear weapons in a year. Linked to this plant by an underground tunnel is a plutonium storage facility with a capacity of 60 tons, by far the largest such storage site in the nation.

These and other facilities, a compliant citizenry, a uniformly supportive congressional delegation, and 43 square miles of mesas and canyons (a portion of which was originally seized from San Ildefonso Pueblo), all make Los Alamos an ideal location for the processing of plutonium and the manufacturing of small numbers of warheads, as some have proposed.

To the press, the Lab is negative about these proposals, but a "can-do" attitude is apparent in planning documents. And, while the public affairs office tells the newspapers that the Lab does not want to process plutonium or make weapons, some LANL managers are lobbying in Washington to do just that.

But wait—isn't the cold War over? Isn't the Lab now devoting itself to environmental cleanup, new civilian technologies, and the safe dismantlement of warheads? Not quite yet. LANL has been lobbying hard for the continued development and testing of new nuclear warheads, and as a result the warhead development budget went up 16 percent this past fiscal year. Most of the increase—about \$110 million—was taken

from the DOE's proposed environmental cleanup funds by Senator Domenici. And the nuclear weapons research and development budget will rise again 3 percent for FY1993.

One current emphasis at LANL is "mininukes," designed to be "effective but not abhorrent" weapons for attacking Third World targets and projecting U.S. power more effectively around the world. Another, larger thrust is for "safer" nuclear weapons, which even some top-level DOE and DOD officials have said is unnecessary. The main idea, apparently, is simply to keep busy—no matter what the cost in dollars, in the international cooperation we need to fight nuclear proliferation, or in the waste streams that are still polluting the Pajarito Plateau.

The Lab's chilling quest for perfectly reliable and "safe" nuclear weapons does not comport with the bulldozers above Tshirege. The waste that is feared for WIPP is already there, in unlined trenches and thousands of plain steel drums—many of which are buried and cannot be inspected—at a waste site that is not more than one hundred yards from surface water.

One of the Old Ones drew a great plumed serpent on the side of the mesa at Tshirege, in praise and invitation to the ever-creative and regenerative power of nature and humankind. Now, nearby, bronze markers warn future generations away, fluttering survey tape keeps workers away from localized "hot spots," and

Sierra Club Joins in Calling for Hearing on Lab Future

The Eight Northern Pueblos Council joined in September with 18 environmental and community organizations—including the Rio Grande Chapter of the Sierra Club—in an appeal to the Regents of the University of California to come to New Mexico and hear our concerns. These groups called for a public hearing and a new sitewide EIS for all proposed LANL activities. The groups also expressed alarm that the University, which runs the Lab, seeks complete release from all environmental and safety liability in its new contract with DOE.

all trees must be removed because their roots can convey radionuclides to the biosphere.

What You Can Do

■ Call or write Judy Espinosa, Secretary of the Environment Department, and urge her to approve decisive enforcement action, with significant fines.

■ Call or write your Senators and Congressman; tell them that we do not want to host a new plutonium processing or production mission at LANL. LANL's most appropriate and beneficial role is to reverse the arms race and clean up its mess, not to design new weapons or prepare plutonium for re-use.

■ Drop us a postcard or call if you are interested in more information, want to be on our mailing list, or can help in any way.



Handling of sludge drums during disposal at Los Alamos Lab, circa 1973. Photo courtesy of LASG.

[Greg Mello is an environmental engineer who works for the Los Alamos Study Group, a nonprofit organization devoted to converting Los Alamos National Laboratory to peacetime missions. He led the first state RCRA inspection team to LANL in 1984. Greg and his colleagues at LASG can be reached at 240 Griffin St., Santa Fe, NM 87501, telephone 505-982-8315.]

Study Group working up presentation on weapons

12/18/92 Page 1

By STEPHEN T. SHANKLAND
Monitor Staff Writer

What's happening with the Los Alamos Study Group exhibit in the new Bradbury Science Museum?

Greg Mello, a member of the Santa Fe group putting the exhibit together, said the exhibit is about one-third of the way finished. He hopes to have the exhibit done by the end of January, he said.

"We're going to turn off our phones and get this exhibit built," Mello said in a telephone interview.

Museum director John Rhoades said the museum hasn't figured out where to put its permanent exhibits, much less the Santa Fe group's exhibit. These details are a lower priority than the details of the move to the new museum — and the museum's planned Feb. 1 partial opening.

Mello said the group wants its exhibit to meet museum standards. "We're working hard to make exhibits that are very factual and aesthetic," Mello said. He wants the exhibit to be "a credit to the science museum and the lab as well as an exhibit that will attract people's interest."

Mello described several components of the exhibit:

- "We'll be looking at the effects of nuclear weapons," not just the history of making the weapons, he said.

- The exhibit will examine "the cost of the arms race over time, both past and present."

- "There will be some information on what we call the 'culture of secrecy and intimidation' — a fundamental problem that prevents the weapons labs from learning from their own people as well as others," Mello said.

- Part of the exhibit will be devoted to the issue of nuclear testing. "There are treaties which we have signed — Threshold and Partial Test Ban treaties that require us to negotiate an end to all nuclear testing at the earliest practical time. We want to highlight our (U.S.) obligations under international law."

- There would be panels "suggesting some possible futures for the lab that do not involve weapons research, design, and testing," he said.

- Finally, the group is looking into borrowing a photographic exhibit from museums in Hiroshima and Nagasaki.

"Our perception was that there was a need for some alternative point of view," Mello said. "Many people I know who visit the museum find that the material presented is very one-sided and propagandistic."

Mello said an exhibit at Lawrence Livermore National Laboratory visitor's center served as a precedent and gave the group impetus to try an alternative exhibit.

Mello talked to Rhoades and Los Alamos National Laboratory Deputy Jim Jackson about the possibility of an exhibit. Mello said his group "implied that we were willing to push for this if necessary. We retained legal counsel."

Mello said Jackson eventually agreed that the group did have the right to present an alternative exhibit in the museum, but details such as how much space the exhibit would receive remained to be settled.

"We feel it's very positive that the lab made this opening for us, because it shows that they want to take, in Jim Jackson's words, 'the high road.'"

"We want to be as cooperative as we can while presenting many of the downsides of nuclear weapons development — a message which we know is intrinsically unpopular with parts of the Los Alamos community, but we know has been omitted."

"The exhibits we're preparing ... show us how far we've come from the bad old days of the Cold War. We hope that they will help initiate a dialogue that will help the lab and the community to reframe the role of nuclear weapons in the post-Cold War world," Mello said.

Mello said his group requested space proportional to what the alternative exhibit received at LLNL. In the new Bradbury Science Museum, that means about 154 square feet of wall space, he said.

The money for the exhibit, which has come from grants from the Ploughshares Fund and Sisters of Loretto, and an earmarked contribution from an individual, totals about \$4,000, Mello said.

N.M. Labs May Build N-Weapons

By John Fleck 12/23/92

JOURNAL STAFF WRITER

Instead of just designing nuclear bombs, scientists at Sandia and Los Alamos national laboratories may start building part of them under a proposal unveiled Tuesday by the U.S. Department of Energy.

The proposal, a response to the vanishing need for new nuclear weapons, calls on the labs to be ready to manufacture some of the parts they only designed and built test prototypes of in the past.

At Los Alamos, the work would

involve metal work and tiny explosives, while Sandia would build electronic parts. The plan stops short of a more controversial proposal to build the bombs' primary radioactive explosive components at Los Alamos.

The proposal will now undergo public review, and the Energy Department is expected to make a final decision by May. John McKean, spokesman for New Mexico Gov. Bruce King, cautioned that any current proposals could be changed by the Clinton administration.

The proposal comes as aging Cold War bomb factories are being shut down and the Energy Department tries to decide how to maintain the capability to build nuclear weapons in the future.

Some new factory buildings would be built, near Kansas City and in South Carolina, under the DOE plan. But they would be smaller than those envisioned under a similar proposal floated a year ago.

Having Sandia and Los Alamos do the work in existing laboratories and shrinking construction at other sites could save \$130 million or

more a year, Howard Canter, deputy assistant secretary of Energy, said during a telephone news conference Tuesday.

At Sandia, the proposal could create 300 jobs, though many of them would be filled by current employees, said Sandia spokesman Rod Geer. Los Alamos' share of the work can be done with existing staff, according to the DOE.

Under the plan, Sandia and Los Alamos laboratories used now for building prototype bomb parts would be used instead to make parts for actual nuclear weapons. It

They Design

would mark a return to the early days of the nuclear weapons program, when Los Alamos and Sandia were the nation's only nuclear weapons factories, turning out a few bombs at a time.


Sandia would get responsibility for some of the electronic components used to help detonate a nuclear bomb. Sandia also would build "neutron generators," or small devices that help kick-start a nuclear blast.

Los Alamos would build the shells that surround the weapons' primary explosive, made out of the metal

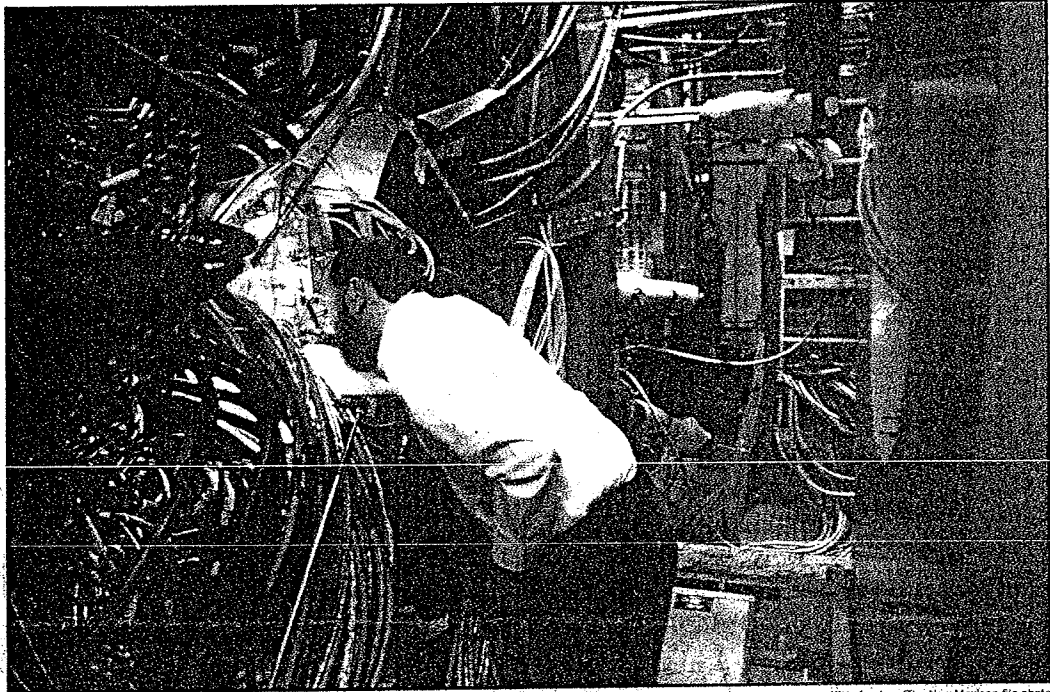
beryllium. Los Alamos also would build stainless steel parts and the tiny explosive detonators used to set off the nuclear blast.

If the proposal is accompanied by a general cutback in nuclear weapons spending, it would not necessarily be a bad thing, said Greg Mello, a member of the Los Alamos Study Group, which works to convert Los Alamos to non-military research.

But it carries with it a risk that the labs could become further entrenched in defense work.

LOS ALAMOS
 **AT 50:**
A NEW MISSION

When scientists first met in the secrecy of Los Alamos to develop the atomic bomb, the world was a different place. How is today's lab meeting the challenge of change?



Kitty Leaken/The New Mexican file photo

Top photo, Santa Fe lab connection Dorothy McKibben, left, Kitty Oppenheimer and J. Robert Oppenheimer consult in LANL's early days. Bottom photo, more recently, a scientist prepares an experiment in the high-tech Anderson Meson Physics Facility. LAMPF is used mostly for non-weapons pursuits, such as producing medical isotopes.

ist prepares an experiment in the high-tech Anderson Meson Physics Facility. LAMPF is used mostly for non-weapons pursuits, such as producing medical isotopes.

UNDER PRESSURE FOR PEACE

By KEITH EASTHOUSE *12/27/92*
 The New Mexican

For 50 years, nuclear weapons development was the primary mission at Los Alamos National Laboratory on Northern New Mexico's Pajarito Plateau.

But today — a year after the collapse of the Soviet Union — the lab is under pressure to beat its swords into plowshares, or face the oblivion that swallowed America's Cold War adversary.

The extent to which Los Alamos and the nation's two other nuclear weapons research labs are turning from wartime to peacetime work has been the subject of a growing debate.

Critics say the research labs, which include Sandia National Laboratories in Albuquerque and Lawrence Livermore National Laboratory in California, want to continue designing new nuclear weapons — despite the fact that all plans for new weapons have been canceled and no new orders have taken their place.

"Instead of filling military requirements established by the president and approved by Congress, as happened in the past, the weapons laboratories want to develop 'prototype' weapons and put them on the shelf for future use." That's the opinion of Tom A. Zamora, senior research analyst with the national environmental group Friends of the Earth, in an article published in the November issue of the

THE SERIES

For 50 years, the mission of Los Alamos National Laboratory has been to design bombs. With the Cold War over, the lab must diversify to survive, but some say the process is going too slowly.

As LANL gets ready to celebrate its 50th birthday in 1993, *The New Mexican* takes a look at the future of the lab and the possible impact on Northern New Mexico.

TODAY

- The shift at LANL: Is the lab acting quickly enough in its switch to peacetime work?
- One scientist who worked on the Manhattan Project says nuclear weapons development should end.

MONDAY

- Residents who have seen LANL develop from its early days look back.
- When the U.S. government took over the Los Alamos Ranch School, there was a clash of two worlds.

TUESDAY

- LANL is placing greater emphasis on joint commercial ventures with private industry, but is it enough?
- Changes at LANL may make for a more independent town of Los Alamos.

Bulletin of the Atomic Scientists.

Defenders of the national laboratories — including Sen. Pete Domenici, P-N.M. — say the labs should continue nuclear weapons research because new weapons may be needed in the future.

"A portion of the investment the nation makes in its weapons laboratories must remain committed to defense research," Domenici wrote in an opinion piece that appeared in *The New Mexican* in August. "Though the number of nuclear weapons is being dramatically reduced, it would be foolhardy to reduce weapons research in proportion."

In October, *The New Mexican* disclosed that policy analysts at LANL had studied a new generation of nuclear weapons that would have much smaller explosive yields than current nuclear weapons and could be targeted against Third World aggressor states like Iraq.

Laboratory officials said the studies were requested by the military and that no work on the weapons, called "micronukes" is currently taking place at the lab.

Nuclear weapons research may be hampered by Congress' plan to phase out nuclear testing — important for development work — by 1996. There is now a moratorium on nuclear testing that will last through July. After

Please see LANL, Page A-5

LANL

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that, a total of 15 nuclear tests will be permitted until 1996, a minuscule number compared to the 96 tests conducted in 1962 at the height of Cold War research.

The prospect of a permanent ban on nuclear testing, combined with the election of Bill Clinton as president, is seen by some as evidence that nuclear weapons development will decline sharply in the near future. Clinton has indicated he would like to see the national labs devote more attention to technologies with commercial applications.

"A lot of people at the labs are resisting it, but some see the writing on the wall," said Peter Gray, also a research analyst with Friends of the Earth.

LANL officials said they are shifting from weapons design work to a caretaker role in which they will focus their efforts on ensuring the safety and reliability of the remaining weapons stockpile.

"We've been turning our approach around from designing new weapons systems to a stewardship or caretaker role," said Dennis Erickson, deputy associate director for the Nuclear Weapons Technology Directorate at the lab, in a recent interview.

That approach was confirmed by LANL director Sig Hecker, who added that weapons research and development work must remain a priority.

"Our primary nuclear weapons responsibilities have changed to providing stewardship of nuclear weapons in the enduring stockpile and maintaining the nuclear competence to deal with future uncertainties," Hecker said.

Hecker, in an article that appeared in a recent laboratory publication, outlined these additional roles for the lab in the post-Cold War period:

- Providing technical capabilities to combat the spread of nuclear arms.
- Maintaining and developing conventional war-fighting capabilities, particularly effective missile defense systems.

- Providing state-of-the-art technologies for environmental cleanup and management of nuclear and chemical waste.

Zamora and others argue that the lab is overemphasizing the need to ensure the safety and reliability of the weapons stockpile.

"Upgrading the safety means redesigning existing weapons to make them less vulnerable to an accidental detonation (that would not be nuclear but which could disperse plutonium)," said Gray of FOE.

Gray said such redesign work is expensive and unnecessary. He said higher safety levels could be achieved through changes in the way weapons are handled. He said, for example, that warheads could be installed on missiles after they are placed in submarines rather than before, reducing the risk of an accident taking place on the dock.

Gray said Los Alamos and the other research labs may be using the safety issue as a means to keep budget levels up for nuclear weapons research, development and testing.

Laboratory officials said ensuring the safety of nuclear warheads is part of the responsibility of the people who designed the weapons in the first place.

"We have cradle-to-grave responsibilities," said LANL spokesman Jim Danneskiold.

Much of the debate about Los Alamos' future has centered on a document known as the lab's Institutional Plan, which outlines proposed construction projects and other activities over a five-year period, between 1992 and 1997.

Greg Mello, head of the Los Alamos Study Group, a New Mexico environmental organization, said the Institutional Plan shows Los Alamos does not plan any significant reductions in its nuclear weapons research, development and testing budget over the next five years.

Mello also said the Institutional Plan indicates 87 percent of LANL construction projects planned for the next five years will be related to weapons development or waste management projects that support weapons activities.

LANL spokesman John Gustafson said the waste management projects are designed to make Los Alamos' operations cleaner and less damaging to the environment.

"The point to environmental waste management is to minimize the environmental impact," Gustafson said.

As an example, he cited a \$3.5 million project to modify the exhaust stack at the Los Alamos Meson Physics Facility — a nuclear accelerator — to reduce radioactive air emissions.

The Energy Department has indicated it wants to phase-out LAMPF by 1994. If it does, that could have a dramatic impact on the lab. LAMPF, which is used to produce medical isotopes and other substances, has been a magnet for top scientists and students from around the country.

The Institutional Plan itself lists \$438.4 million worth of projects relating to weapons research, development and testing. That's 61 percent of the total of \$723 million in proposed construction projects.

The plan lists \$211.2 million worth of projects relating to environmental cleanup and waste management — or 29 percent of the total.

Lab spokesmen say it is misleading to focus on the Institutional Plan because it was written in 1991, before the collapse of the Soviet Union and arms control initiatives by President Bush. They say the plan contains out-of-date information, particularly budget figures.

Mello said there are no other budget projections to rely on. A new Institutional Plan, for 1993-1998, is due in the coming months.

Danneskiold said the latest budget



Sig Hecker
LANL director

"Our primary nuclear weapons responsibilities have changed to providing stewardship of nuclear weapons in the enduring stockpile and maintaining the nuclear competence to deal with future uncertainties."

figures show LANL is shifting its priorities.

He said LANL's funding solely for nuclear weapons research, development and testing will decline from \$315 million in fiscal 1992 to \$295 million in fiscal 1993.

Danneskiold said funding for work on new priorities — such as arms control and nuclear non-proliferation — will increase by approximately \$22 million, from \$88 million in fiscal 1992 to \$110 million in fiscal 1993.

Additionally, he said, the budget for environmental cleanup, environmental waste management and other activities is slated to grow from \$145 million in fiscal 1992 to \$225 million in fiscal 1993.

Danneskiold said another indication LANL is scaling down its nuclear weapons work is that staffing levels in the nuclear weapons program have declined from about 1,800 employees in 1986 to about 1,200 today.

Danneskiold said those employees were not fired, but were reassigned elsewhere in the lab, some to different types of weapons work, others to non-weapons work.

Melinda Kassen, of the Environmental Defense Fund in Boulder, Colo., believes that Los Alamos and the other two national laboratories have not adequately shifted gears. But to a certain extent, she said, that's not the labs' fault.

"The labs have not made the transition to the post-Cold War world," Kassen said. "But has the federal government made a decision about the labs in the post-Cold War world? I think the answer is no."

"There has been no strategic plan that the Energy Department has articulated about what the labs can best do," Kassen said.

The uncertainty has only been heightened by Clinton's election.

At a September speech at Sandia National Laboratories, Clinton said he supports expanding the national labs, but wants to redirect their efforts to develop commercially usable technologies.

According to Peter Didisheim, deputy chief of staff of the House Committee on Science, Space and Technology, a fundamental question for LANL is what the defense budget

within DOE is going to be.

"If money is going to be shifted to civilian activities, then (Los Alamos') budget for nuclear weapons (research, development and testing) could be affected," Didisheim said.

He added that if the cuts are big enough — on the order of 25 to 50 percent — they could lead to a consolidation of nuclear weapons design activities now shared by Los Alamos and Lawrence Livermore National Laboratory in California. He said it is even possible that one of the three national labs could be closed if the nuclear weapons budget shrinks enough.

The idea that one of the three nuclear weapons labs should be closed was first voiced in February by Rep. George Brown Jr., D-Calif., chairman of the House science committee.

"With the end of the Cold War, do we still need three nuclear weapons labs, each funded at approximately \$1 billion per year, and each with employment of about 8,000 people? It seems to me (the) answer is no," Brown said in a letter to Energy Secretary James Watkins.

Watkins wrote to Brown that all three labs are needed — particularly the two nuclear design labs, Los Alamos and Livermore.

"They're needed," Watkins said, because competition between the two laboratories provides the strongest guarantee of safety and reliability in the nuclear weapons stockpile. That argument is repeated by LANL officials.

But rather than maintaining two separate design teams at two laboratories, some have suggested having two competing teams at the same facility, freeing the other laboratory to pursue non-weapons work.

Zamora, in his *Bulletin of the Atomic Scientists* article, suggested that weapons development work be phased out at Livermore and transferred to Los Alamos. His suggestion came, in part, because of the four weapons that could potentially undergo safety modifications were all designed at Los Alamos — the warheads for the W76 and W88 Trident missile, the B61 bomb and the W80 cruise missile.

In the past year, there have been indications that nuclear weapons pro-

duction work formerly done at the DOE's Rocky Flats plant near Denver may be temporarily transferred to Los Alamos until a permanent production facility can be built. The Rocky Flats plant is closed due to environmental, health and safety problems.

Gray said Los Alamos could fill the Rocky Flats production role because it has the capability to build plutonium "pits," the radioactive metal spheres at the heart of nuclear weapons.

The lab also has plutonium handling, processing and storage capabilities that may make it suitable as a replacement for Rocky Flats.

"Los Alamos could do remanufacturing (of pits) for a stable arsenal of 1,000 warheads or less," Gray said.

Brian Costner of the Energy Research Foundation, a watchdog group based in South Carolina, said there is a chance DOE may never build a permanent plutonium plant and that production work at Los Alamos could become permanent.

"LANL is becoming a backup production complex when there's nothing to backup," Costner said.

The prospect of Los Alamos taking over from Rocky Flats, albeit on a much smaller scale, is opposed by some in New Mexico.

Their reasoning, in part, is that production work involves the handling of more plutonium than design work, increasing the chances of endangering workers and contaminating the environment.

John Stroud of Concerned Citizens for Nuclear Safety, a Santa Fe environmental group, said if LANL becomes a production facility, that would interfere with the lab's efforts to diversify into non-weapons work.

"There is a great danger the lab will become a second-rate production facility," Stroud said. "If that happens, the best people may leave because a lot of scientists don't want to be associated with a production facility."

Stroud said the laboratory is open to the possibility of taking on production work.

"They're making arrangements to build more swords," Stroud said of LANL and DOE officials.

Laboratory officials have said repeatedly they don't want to get involved in production work. Gustafson, the LANL spokesman, said last week the lab is "not interested in being a production site."

The University of California, which manages LANL for the Energy Department, has also objected to production-scale plutonium processing and the manufacture of bomb parts at Los Alamos.

Last week the Energy Department, in response to the vanishing need for nuclear weapons, proposed that Los Alamos and Sandia manufacture some of the weapons parts they only designed and built prototypes of in the past.

At Los Alamos, the work would involve metal work and tiny explosives, while Sandia would build electronic parts.