



Los Alamos Study Group

Nuclear Disarmament • Environmental Protection • Social Justice • Economic Sustainability

Plutonium pit production and related issues in the New Mexico and national press

Print media only, November 1989 through December 2006

January 17, 2007

Today's popular opposition to pit production in New Mexico is just the latest phase of an opposition that began in 1989. Opposition is certainly not confined to the immediate context of the National Nuclear Security Administration's (NNSA's) "Complex 2030" proposal. Public opposition to pit production at LANL has been vocal, consistent, and strong in New Mexico for 17 years so far. At the present, there is no publicly-expressed support for pit production at LANL whatsoever, even in Los Alamos.

Easily-accessed evidence of widespread popular opposition to pit production can be found at www.lasg.org; see especially the *Call for Nuclear Disarmament* there.

For the most part this compilation includes only those articles which mention or otherwise involve the Los Alamos Study Group. The Study Group began formal operation in May 1992, and prior to this our media files are spotty. To compensate for this, this compilation includes a broader range of materials from 1989 to 1992. Opposition to warhead core ("pit") production at Los Alamos National Laboratory (LANL) began in the fall of 1989, just a few months after pit production ceased at the Rocky Flats Plant.

This compilation does not include all the New Mexico press articles on this subject, although it includes most of them. National coverage is also incomplete. We have not included our own publications or any listing of radio and television programming (local, national, and foreign) on the subject of pit production at LANL.

Bill funds Los Alamos

4/12/89

By PETER EICHSTAEDT
The New Mexican Staff
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Work could begin next year on a \$210 million plutonium-processing and weapons-research complex at Los Alamos National Laboratory that officials say is the largest construction project in the lab's history.

In late September, President Bush signed into law a bill that gave the lab \$44 million to begin construction of the Special Nuclear Materials Research and Development Laboratory. The law passed through Congress with no fanfare.

The lab already has received \$32 million over the past two years for development of the project. An additional \$134 million is expected over the next four years during construction, according to laboratory projections.

"The laboratory will be used for research on and development of actinide (radioactive) materials that are germane to the Laboratory's nuclear weapons program," according to a lab publication titled "Research Highlights, 1988."

"Much of the research in the complex will focus on developing methods for recovering plutonium contained in residue

and scrap materials," the publication stated.

The publication did not say if old nuclear warheads were included in the term "scrap materials." The lab historically has designed and developed the nation's nuclear warheads, although production occurs elsewhere.

"Design of the complex is expected to take approximately two years; construction is scheduled to begin during the winter of 1990," the publication stated.

The complex will consist of three buildings: a multi-story 91,000-square-foot main building, a 65,000-square-foot office

plutonium plant

building and a 16,000-square-foot utility building.

Dave Jackson, a spokesman for the Department of Energy in Albuquerque, said an environmental impact statement will be required before construction on the project could begin.

The process of developing an environmental impact statement will require public comment, he said. But no schedule for public hearings was available.

Jackson said information on the project and the impact statement would be available in early December. Jackson did

not know if the impact statement would delay the project.

The project prompted a Santa Fe-area anti-nuclear group to question the direction of laboratory work and the handling of radioactive materials in the future.

"It raises real concerns of the direction the lab is going in terms of military research," said Richard Miller, director of Concerned Citizens for Nuclear Safety.

Funding for the new laboratory building is noted in the LANL five-year plan and is listed under "Weapons Research and

See Bill on Page A-2

Bill funds plant for plutonium

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Development Activities."

The five-year plan also details a variety of other new construction projects proposed at the lab, but as yet unfunded.

One is called the Radioactive Liquid Waste Treatment Plant, which would cost \$100 million. The plant funding is not anticipated until 1992 and would continue until 1995.

Another item in the five-year plan was \$2.4 million this year for work at one of the lab's radioactive landfills called "Area P."

The U.S. Environmental Protection Agency is expected to sign a

Plutonium plant concept grows

4/17/89

By PETER EICHSTAEDT
The New Mexican Staff

Both the purpose and cost of a proposed plutonium research complex at Los Alamos National Laboratory have been expanded from the original proposal, a laboratory spokesman said Thursday.

Originally budgeted for \$210 million, the cost of the Special Nuclear Materials Research and Development Laboratory now is estimated at \$380 million, laboratory spokesman John Webster said.

In addition to weapons-related research with plutonium and "scrap metals," the new laboratory also will be used to pre-treat plutonium waste, he said.

Webster said the laboratory will handle only waste generated by Los Alamos laboratory,

not waste from other laboratories.

"There should be less waste," because of the pre-treatment program, he said. "The amount of waste should be reduced. It will be more efficient."

The research will include ways to process radioactive materials from old nuclear warheads, Webster said.

The radioactive contamination is not extensive, he said, but affects devices used to handle radioactive materials.

The new complex will be the biggest construction project ever undertaken by the laboratory, he said.

Ground-breaking originally was scheduled for late 1988, according to information on the project released in May 1988. But the project has been

delayed to give laboratory officials time to study the effects of the complex on the environment, Webster said.

Webster said the federal Department of Energy, the umbrella agency for the lab, will issue a "notice of intent" to prepare the impact statement in mid-December.

A public meeting to gather comments on the scope of the environmental study tentatively is set for mid-January in Los Alamos, he said.

Webster said the environmental impact statement must be approved by the Energy Department before any work other than design takes place.

Construction of the project now is scheduled to begin in September 1991, he said. It will take about four years to com-

plete, he said.

Congress already has allocated about \$32 million for the project, not all of which has been spent.

An additional \$44 million was included in a bill signed into law by President Bush in late September.

In May 1988, an \$11.9 million architectural and engineering design contract was awarded to Flour-Daniel of Irvine, Calif.

The design work was expected to take nine months but actually took more than a year to complete. It was finished recently.

Members of the state's congressional delegation said they have been aware of the project for two years and support spending federal money for it.

ABQ TRIB 11-27-89

Los Alamos plans plutonium lab to replace old facility

By TONY DAVIS
Staff reporter

Los Alamos National Laboratory is planning its most expensive construction project ever, a \$350 million to \$380 million plutonium research facility the lab says will be the finest of its kind in the world.

In the meantime, a 36-year-old building to be replaced by the new facility in the mid-1990s is a safety risk that is "at the end of its useful life," according to a U.S. Department of Energy document from Washington, D.C.

A Los Alamos spokesman this week said the old building presents "no health risk to any of the (300) employees or the general public."

Next month DOE will publish a notice of intent in the Federal Register to prepare an environmental impact statement for the new facility. It also will start accepting public comments on

what the environmental document should cover.

The old building, called the Chemical and Metallurgy Research Building, has "corroded and breached air-handling ducts, inadequate supply of filtered air, marginal building-wide filter systems and inadequate control systems," said a DOE budget request document submitted to Congress early this year.

"Many areas in the (old) building are radiologically contaminated and beyond economically viable cleanup," said the DOE document, which was seeking money for the new lab.

"Project completion (of the new building) will occur in (fiscal year) 1994 at the earliest — a time during which likelihood of serious accidents and litigation is increasing," the DOE document said.

An identical warning about the old building appeared in a DOE budget request for the new facility in 1988.

The new Special Nuclear Materials Research and Development Laboratory, like the old building, will be used to study how to recover plutonium from residue and scrap material. The new lab will be "the world's most advanced laboratory for plutonium research," Los Alamos officials said in a newsletter about the facility.

The new laboratory will have two to three buildings, totaling up to 170,000 square feet, compared to 550,000 square feet for the old building.

Construction could start by 1991, after completion of the environmental impact statement. The statement will outline how DOE believes the new project will affect the environment and what DOE will do to minimize the effects.

Los Alamos is a key DOE research facility, serving the department's weapons production complex across the United States and receiving money

from DOE's budget. The University of California at Berkeley operates Los Alamos for the department.

A Los Alamos spokesman said the concerns about the old building have been addressed.

"The concerns expressed by DOE in its documents reflect problems that have occurred and continuing concerns both by the DOE and the lab," said Los Alamos spokesman John Webster. "But things are upgraded and replaced before they present any health threat to the people who work there. We monitor that place carefully and there is no threat to anyone who is there."

An aide to Sen. Jeff Bingaman, however, said DOE officials are trying to have it both ways.

"They tell us in Congress it's a very severe situation, and it's going to cost hundreds of millions of dollars to replace it," said Ed McGaffigan, legislative director for the New Mexico

Democrat. "They also tell their own employees not to worry, we've got it under control."

McGaffigan said he's never visited the old building and can't say if it's safe or not. But if it is as bad as the DOE memo makes it sound, DOE should have started planning the new building sooner, he said.

"The problem is that for most of those years production of nuclear weapons took priority over the environment," McGaffigan said.

Plutonium is a key element in nuclear weapons design and production. It has been used in research at the lab since the World War II Manhattan Project to build the first atomic bombs. It can cause cancer if inhaled.

Congress has authorized the new lab's construction, but has appropriated only about \$75 million for it so far.

DOE's critics in Santa Fe have raised concerns about the new facility.

DOE planning talks for plutonium facility

By CHARMIAN SCHALLER
Monitor Staff Writer

The Department of Energy is planning a public "scoping meeting" late this month to gather comments on a planned new Los Alamos National Laboratory plutonium recovery facility.

The DOE notice of intent to prepare an environmental impact statement for the project appeared today in the Federal Register.

The public meeting will be held at 7 p.m., Jan. 31, in the Pajarito Room of Fuller Lodge in Los Alamos.

The new Special Nuclear Materials Research and Development Laboratory, a 193,000-square-foot complex, will take over

the plutonium handling functions of LANL's existing 37-year-old Chemical and Metallurgical Research building.

The new complex will be located at Technical Area 55. The location will make possible the consolidation of all LANL plutonium-handling operations in one area.

Calvin Martell, technical representative from CLS-1, the analytical group of the Chemistry and Laser Science Division, said, "They're going to be reprocessing plutonium — producing it from scrap."

The work at the new facility will involve recovery, not original production, of plutonium, he emphasized.

He said those working at the facility also will

be doing research and development. "They want to learn to do it better," he said. Information developed through work at the facility will be made available to other facilities including Rocky Flats.

Martell added that the new building, its location, and the work done there should make it possible to lessen plutonium impact on the environment.

The facility will be closer than CMR to sites where plutonium scrap is stored at LANL, he said.

In response to Monitor questions, Martell said that similar work now is done at PS4, which is near the planned site, and that at PS4, the "vast majority" of the plutonium recovery

work currently deals with "internal recycle" material — plutonium scrap stored at LANL.

Asked about the transportation of scrap plutonium to the proposed site of the new complex, Martell said the scrap will be multiply packaged in approved containers and moved in escorted trucks.

Martell said about half of the new complex will be devoted to analytical facilities where plutonium and its impurities will be analyzed.

Design of the complex is in progress and should be completed this year. Construction is expected to be completed in the fall of 1994.

One of the essential parts of the design of the new complex will be planning for specialized air filtration. High-efficiency particulate air fil-

ters (HEPA filters) will be used on incoming and outgoing air systems.

The total cost of the facility (through all of its phases) could be as much as \$380 million. The actual cost will depend on completion time. Thus far, the DOE has sought \$210 million for the project, and Congress has approved \$76 million in funding for the first three years of the project (through 1990).

The public meeting and written statements will be used in identifying issues that should be covered in a subsequent draft environmental impact statement on construction of the building, according to the DOE notice. Once a draft

(Please see PLUTONIUM, Page 6)

6 Friday, January 12, 1990

Los Alamos Monitor

Plutonium (from Page 1)

EIS is completed, there will be further opportunities for public comment.

The notice published in the Federal Register said that issues identified so far for coverage in the environmental impact statement include: public and occupational safety ("The radiological and nonradiological impacts of routine operations and potential accidents including projected effects on workers and the public will be addressed in accordance with DOE policy."); regulatory compliance; air quality ("The effects of radioactive and nonradioactive air emissions."); waste management ("The environmental effects of the generation, treatment, transport, storage, and disposal of radioactive,

hazardous and solid wastes and mixtures of the foregoing."); packaging and transportation of radioactive materials ("... on LANL site roads that are open to the public."); decommissioning and decontamination at the end of the new facility's operating lifetime; potential impact on historical, archaeological, scientific or culturally important sites; impact on threatened or endangered species; and any cumulative effects.

The announcement said that background information on DOE operations at LANL is contained in the "Final Environmental Impact Statement — Los Alamos Scientific Laboratory Site," a 1979 DOE document that is available at a number of libraries, among them Mesa Public Library in Los Alamos, the New Mexico State Library in Santa Fe, and the J. Robert Oppenheimer Study Center at LANL.

Martell provided several interesting asides

on the project:

- He noted that perhaps the most significant historical item on the site, a log cabin from Los Alamos County's homesteading days, was moved many months ago to a new site adjacent to Fuller Lodge and the Los Alamos Historical Museum.

- And, he said, there are plans to decontaminate CMR and reuse its 550,000 square feet — primarily as chemical laboratory space, unifying LANL's scattered chem lab areas.

He said investigation is now in progress to determine the impact over the years of radioactive work on the duct work, plumbing, and other portions of CMR. When the investigation is completed, he said, the necessary material will be removed, and new equipment will be installed.

- The CMR is safe, he said.

(Although the DOE's funding request told Congress that, "Corroded and breached air handling ducts, inadequate supply of filtered air, marginal buildingwide filter systems and inadequate control systems contribute to serious situations developing....")

But, he said, the cost of doing the ongoing repairs to keep the aging building safe are growing rapidly. The laboratory is saying, Martell said, "Let's build a new one before we have trouble."

Those wishing to comment by mail should send letters postmarked by March 1 to: Donald Lucero, U.S. Department of Energy, Albuquerque Operations Office, P.O. Box 5400, Albuquerque, N.M., 87115, telephone 665-2170. Requests for copies of the draft EIS, once it is developed, should be directed to the same man.

Questions about further information on the EIS process should be directed to: Carol M. Borgstrom, director, Office of NEPA Project Assistance (E11-25), U.S. Department of Energy, 1000 Independence Ave. SW, Washington, D.C., 20585, telephone 202-586-4600.

According to the Federal Register notice, "Individuals desiring to comment orally at this meeting (on Jan. 31 in Los Alamos) should notify Mr. Lucero ... as soon as possible so that the department can arrange a schedule of presentations. Persons who have not submitted a request to speak in advance may register to do so at the meeting. The meeting will not be conducted as an evidentiary hearing, and there will be no questioning of speakers."

So that everyone will have an opportunity to speak, the notice said, speakers will be limited to five minutes each.



CCNS

Concerned Citizens for Nuclear Safety

Jan. 22, 1990
FOR IMMEDIATE RELEASE

Press Contact: Daniel Gibson
988-9210 or 986-1973

CCNS PREPARES FOR UPCOMING SCOPING HEARINGS REGARDING LANL SPECIAL NUCLEAR MATERIALS RESEARCH & DEVELOPMENT FACILITY

Concerned Citizens for Nuclear Safety is busy preparing for the upcoming "scoping hearings" regarding Los Alamos National Laboratory's proposed Special Nuclear Materials Research & Development facility.

The scoping hearings will be held at 7 p.m., Jan. 31 at the Fuller Lodge in Los Alamos; and at 7 p.m., Feb. 13 at Northern N.M. Community College in Espanola.

The hearings will provide the public with a forum to suggest what LANL should include in the Environmental Impact Statement the laboratory is required by law to produce for this proposed facility. The facility will be the single largest construction project in the lab's history, with a price tag near \$400 million. It will be used for research on plutonium and other fissionable products, and recovery of plutonium from obsolete weapons and weapons-related scrap.

"We are apprehensive about this proposed facility and we plan to convey our misgivings to LANL at the hearings," says CCNS consultant Greg Mello.

"We question if this is a wise use of our nation's resources in light of decreasing tension in international relationships. Enhanced production of plutonium for use in nuclear weapons is very questionable when you consider we already have over 20,000 nuclear warheads. The facility will provide some new short-lived jobs, but it's not clear if this project will really help our local economy; in fact, it may hurt it. What will be its impact on tourism, especially if there is an accident involving plutonium, one of the most toxic, long-lived substances there is? Is this the kind of economic development we want in northern New Mexico? We feel the talent and creativity of LANL staff would better be used addressing pressing environmental and social problems rather than production of new devices of war."

(over)

LOS ALAMOS NATIONAL LAB'S PROPOSED PLUTONIUM RESEARCH & PRODUCTION BUILDING

In 1988, Congress quietly granted Los Alamos National Laboratory (LANL) \$10 million to begin design work on the largest construction project in its history, the proposed Special Nuclear Materials Research and Development (SNMR&D) building. This building is intended for plutonium research and production. This giant complex will have a floor space equivalent to the area of over five football fields. The "special nuclear materials" which the lab will be handling are primarily plutonium and the fissionable isotopes of uranium. In 1989, an additional \$22 million was given to the lab to continue design work. If the funding continues LANL expects to begin construction in 1991, with a price tag of nearly \$400 million.

The proposed complex would house the world's most advanced facilities for plutonium research and also assist LANL's current plutonium production and recycling center at Tech Area 55. The SNMR&D building is intended to replace portions of the Chemistry and Metallurgy Research Building, parts of which have become unsafe and too contaminated to economically clean up.

In 1981, LANL was producing over a ton of plutonium a year and since 1984 has taken over varying amounts of production work from the Hanford complex in Washington state and the Rocky Flats Plant in Colorado. There is now mounting pressure for LANL to take over the reprocessing work of Rocky Flats. Since LANL has no outside agency that limits the amount of nuclear waste it can store or bury, a proposal to shift waste-producing production activities to LANL is highly probable. A recent report from the National Research Council said:

"...the Plutonium Facility (Building TA-55) at LANL is an efficient and productive operation for scrap recovery. This facility, operating for the most part on a one-shift, 5-day schedule, can process almost half as much plutonium as Rocky Flats can (even if Building 371 were to be renovated) and turn out a purer product. If additional capacity is desired, institution of a three- or four-shift operation at the LANL facility should be more than adequate to handle the complex's plutonium recycling needs...Although there may be resistance at LANL to converting Building TA-55 into a full-scale production facility, an administrative solution should be possible."¹

Moving production would relieve Rocky Flats of limited waste storage problems by transporting pre-waste raw materials (plutonium contaminated scrap and old nuclear bombs) to LANL instead, thus producing nuclear waste here rather than at one of DOE's troubled facilities currently under scrutiny.

The capabilities and purposes of the new facility support an expanded plutonium processing role for LANL. As stated in LANL's January, 1990 Fact Sheet:

"...research and development [in this building] consists, generally, of developing and verifying advanced chemical procedures for the recovery and purification of special nuclear materials and associated waste minimization. The systems and equipment necessary to implement the new or improved processes are then demonstrated so that the technology may be incorporated at other Department of Energy facilities."

Whether or not the "new or improved processes" that LANL develops would ever be moved to another facility is a matter of speculation.

Though funding for this building is derived from LANL's nuclear weapons budget, the building could play a significant role in the development of civilian nuclear reactors and exotic fuel technologies. There still is no safe means for the permanent disposal of radioactive wastes. The proposed research into plutonium-related technology raises many serious health and safety questions regarding what to do with the wastes generated and the transportation of raw radioactive materials to and from the facility.

"The nation is awash in plutonium."² The SNMR&D building will produce even more surplus plutonium and its highly toxic and long lived waste byproducts. The wisdom of proceeding with this project is questionable given the risks to both the public and the environment. CCNS feels that the millions of dollars earmarked for this endeavor would be better spent in the research and development of safe alternatives and new technologies to clean up the millions of tons of radioactive waste already contaminating the environment across the U.S.; it is these wastes which pose the greatest and most immediate threat to public health and safety.

¹ THE NUCLEAR WEAPONS COMPLEX: Management for Health, Safety, and the Environment, National Academy Press, Washington D.C. 12/89, p. 84

² John Herrington, former Secretary of the U.S. Department of Energy, before a congressional committee in 1988.

Advisory Committee on Nuclear Facility Safety

to the

United States Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

November 6, 1990

The Honorable James D. Watkins
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Admiral Watkins:

Your Advisory Committee on Nuclear Facility Safety met in Los Alamos, New Mexico, on September 24 and 25, to review specific safety issues at the Los Alamos National Laboratory (LANL). The Committee toured selected facilities at the laboratory, heard technical presentations from representatives of the laboratory staff, and received comments from the public. We recognize that a brief visit is not much more than an audit. However, based on this meeting, we have the following observations and recommendations.

LANL appears to be well managed and the employees we encountered seemed to be both well-trained and enthusiastic about the work they were doing and satisfied with the working environment and resources they were provided. From the limited sample the Committee saw, the research and development program at LANL impressed us as being well planned and well conducted.

We were also pleased by the extent to which LANL management has recognized the importance of, and is working to implement fully, two fundamental safety principles which you have espoused: the need for line managers to take active responsibility for the safety of the employees and facilities under their control and the need to instill an awareness by employees at every level of the importance of safety as a primary parameter in all of their activities. We did find instances, particularly at the research/waste management interface, which made it clear that there is still work to be done. However, we believe that LANL management will be successful in developing the new safety culture.

During the public comment session, some persons expressed concern that environmental monitoring results are not becoming available to the public until many months after they are completed. In one case, this delay was two years. Apparently, most of the delay arises from the approval process for these reports by headquarters offices and is a generic problem affecting the release of environmental monitoring information at other sites as well. We believe that it is important for the general public and those most directly exposed to have timely access to this environmental monitoring information concerning routine or accidental releases of

radiologic or toxic materials. Therefore, we recommend that ways be sought to speed up the release of monitoring reports, such as has been done at the Rocky Flats Plant. One possibility is to delegate approval authority to either the Albuquerque Operations Office (ALO) or LANL.

Finally, the Committee believes that the plutonium processing capabilities and expertise it saw at TA-55 are a significant but under-utilized asset to DOE. Much of the equipment and many of the procedures used there are state-of-the-art and represent substantial improvements over equipment and procedures in use elsewhere in the DOE complex. For example, the Committee was especially pleased to see that the technology used for the glove boxes at LANL was much more advanced than that at the Rocky Flats Plant, and that careful attention was being devoted to prevention of contamination of duct work. We recommend that serious consideration be given to how the capabilities at TA-55 could be used to provide broader benefits to the complex.

I would be glad to discuss any of these issues further.

Sincerely,

John F. Ahearne

for John F. Ahearne
work Chairman

Committee says LANL should use plutonium capabilities

By BOB QUICK
The New Mexican Staff

An advisory committee says Los Alamos National Laboratory's plutonium processing capability is under-used — but that doesn't mean the lab will expand its handling of the radioactive material, a spokesman said Wednesday.

"I do think it is very clear that we are a research and development facility," said Eugene Werka, association director for Chemistry and Materials at the Laboratory. "We are not a (plutonium) production

facility nor is it our intent to do production."

Werka was responding to a Nov. 6 letter, made public this week, from the Advisory Committee on Nuclear Facility Safety to Energy Secretary James D. Watkins.

The committee, which consisted of 16 experts in various areas of nuclear energy, visited Los Alamos in late September to inspect the laboratory and to hold public meetings.

In the letter to Watkins, the committee said the laboratory "ap-

pears to be well managed, and the employees we encountered seemed to be both well-trained and enthusiastic about the work they were doing and satisfied with the working environment and resources they were provided.

"From the limited sample the committee saw, the research and development program at LANL impressed us as being well-planned and well-conducted."

The committee had special words of approval for the lab's plutonium

processing facility, Technical Area-55.

"Much of the equipment and many of the procedures used there are state-of-the-art and represent substantial improvements over equipment and procedures in use elsewhere in the DOE complex," the letter said. "The plutonium processing capabilities and expertise . . . at TA-55 are a significant but under-utilized asset to DOE."

"We certainly were very pleased with the committee's comments," Werka said. "We take very seriously

our responsibility to the public and the nation that plutonium processing here is done in a safe, secure and environmentally benign manner."

Werka said the laboratory was the Energy Department's "lead laboratory in developing advanced plutonium processing technologies."

Werka said he was not able to interpret exactly what the committee meant in its letter with a comment that, "Serious consideration (should) be given to how the capabilities at TA-55 could be used

to provide broader benefits to the complex."

He said Watkins has appointed a committee to study what the Energy Department needs to do with plutonium processing. "We are working with Rocky Flats (plutonium processing plant in Colorado) to help it get up and running again."

Rocky Flats last January stopped shipments of the plutonium components used as the triggers of thermonuclear bombs. It is the only plant in the country that makes such triggers.

LOS ALAMOS Monitor

Vol. 28, No. 63

Friday, March 29, 1991

Lab: CMR facility safe, but SNM lab needed

By CHARMIAN SCHALLER
Monitor Staff Writer

There's a certain irony in the position of people proposing construction of a new Special Nuclear Materials Laboratory.

When they point out the age and potential deficiencies of the Chemical and Metallurgical Research facility, the current site for work that would be transferred to the SNM, there is an outcry of concern from people — especially people in Santa Fe and Taos — who are worried about exposure to radioactivity.

(The phrase "special nuclear materials" has a very precise meaning. There are five such materials: enriched uranium; plutonium 242; plutonium 239 and 241; uranium 233; and plutonium 238.)

But if lab spokesmen downplay the problems at CMR, they are less likely to convince Congress to provide the funding for the new state-of-the-art building.

Some of the same people who frequently express concerns about radiological safety have, at several public hearings, raised concerns that Los Alamos National Laboratory would use the proposed SNM for production of rather than research on plutonium. Essentially, they say, they fear that Rocky Flats' production work would be transferred to LANL.

The National Research Council once suggested such a possibility.

But Monitor files show that a series of questions posed in 1989 and 1990 to people including LANL Director Sig Hecker and Energy Secretary James Watkins all drew the same response:

News analysis

There is no intent to use the SNM for production of plutonium. LANL's plutonium focus is research.

'RELIABILITY' IS THE ISSUE

In a recent interview with John R. Phillips, group leader of CLS-1, the Analytical Group in the Chemical and Laser Sciences Division (which occupies nearly half of the CMR), and Ronald G. Stafford, deputy division leader for radiation protection in the Health, Safety and Environment Division, it was apparent that both men were aware of all of these ironies.

Both strongly support construction of the SNM.

Stafford commented, "I was convinced that that project would be a sellable project" because a state-of-the-art facility would be replacing a building now almost 40 years old.

But both also emphasized that CMR is safe. Maintenance, they said, has always been done and is now an even more important focus of attention.

The issue, they said, is not one of safety in this aging building, but of "reliability."

Were safety concerns to arise, they said, CMR would be shut down immediately.

Safety comes first and is assured, they said. But if a shutdown were necessary, it would bring plutonium operations at Los Alamos National Laboratory to their knees.

The lab's fiscal 1991-92 field budget request

LANL

AND THE ENVIRONMENT

prepared for Congress, provided at the request of the Monitor by Leon Kantola, project controls manager for the SNM, put it this way:

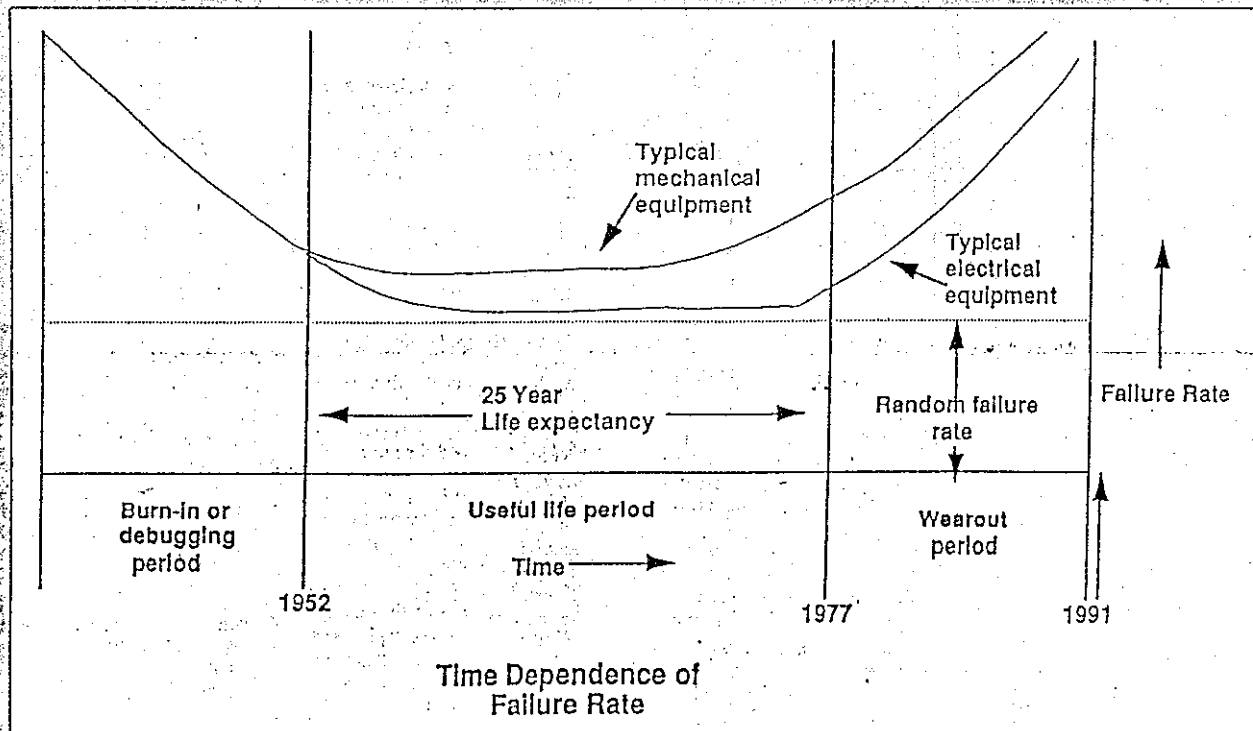
"Evaluation of existing conditions and recent maintenance and repair experience in the CMR Building have led to the proposal to replace the facility. Over the past 38 years, the utilities, gloveboxes, and hoods have deteriorated to some extent so that the potential for program interruption because of equipment breakdown or maintenance has become a major concern.

"Maintenance costs will increase with time.

"Despite a program of continuing upgrade of equipment and facilities, the age of the CMR Building and current awareness of new initiatives in the areas of health, safety, and environment have led laboratory management to the decision that a major upgrade or replacement of the facility is necessary and should be undertaken to reduce the risk of system or equipment failures that could result in programmatic interruptions.

"Any significant disruption of the analytical chemistry activities in the CMR Building would

(Please see CMR, Page 10)



effectively bring all plutonium facility operations at Los Alamos to a halt....

"There are no other laboratories at Los Alamos that are either available or suitable for the SNM research and development work now conducted in the CMR Building. Analytical chemistry capabilities for SNM exist at Rocky Flats, Savannah River, New Brunswick Laboratory, and Hanford. However, none of these facilities can be considered as a viable alternative for the various analyses that are now performed at the CMR building and that are required for the support of the Plutonium Processing Facility work."

The budget request said:

"Our analytical laboratories have certain unique capabilities: better reliability, lower limits of detection, and the ability to develop techniques for determining unusual impurities.

"Transfer of functions to those facilities would have other severe negative programmatic impacts. A most important programmatic consideration is the short turnaround time for required results for experimenters and production personnel.

"Present schedules could not be maintained with off-site shipment for analysis. If samples were to be shipped elsewhere, there would also be a severe packaging problem; metallic plutonium and alloys react with water and other atmospheric gases, and such reactions could destroy the integrity of the samples and therefore invalidate the analysis. For the above reasons, only options at Los Alamos have been developed."

FUNDING FOR SNM AND CMR

The proposed SNM is in limbo, right now. Congress appropriated no funds for SNM in fiscal 1991, although it had provided \$44 million for fiscal 1990 and a total of \$32 million for the project in years before that.

Stafford said there is hope that continued design of the SNM will be funded again in fiscal 1995.

But even if the project eventually moves ahead, it will be 5-10 years before the building is done.

In the meantime, some \$7 million — including the unspent portion of the \$44 million and certain environmental safety and health money — is being spent for refurbishment of the CMR.

ly planned for the SNM.

The invention was a "sliding sash" developed by David Carlson, Bob Comer, Joel Dahlby, Brad Gallimore, Calvin Martell, and Walter Stone — and submitted for patent.

The "sash" is essentially a screen that blocks most of an open-front box used in lab chemistry. The sash leaves only the minimal opening needed for work in progress. It can be shifted from side to side to expose different areas.

Stafford said the use of the sash "reduces the air demand by a factor of two to three." A lab NewsBulletin article in April 1990 said, in addition, "Lab tests over a 16-month period concluded that the new box increases retention of particles within the box by a factor of 10, thus greatly decreasing the possibility of contamination outside the box."

These sliding sashes now have been installed in a number of places in CMR.

Is air flow adequate today?

Phillips said, "Yes."

Stafford said, "It was getting close," but the measures taken solved the problem.

• Phillips said the building has some 400 glove boxes and they do deteriorate. But, he said, "We probably replace 10 to 15 boxes per year" with new "state of the art boxes with special coatings."

• The building itself?

The building has seven "wings" — 1, 2, 3, 4, 5, 7, and 9.

Stafford said three wings — 2, 5 and 7 where most of the plutonium operations take place — were upgraded in 1977.

After upgrading, Stafford said, these wings had two stages of high-efficiency particulate air filters (HEPA) filters in place. They are tested regularly, he said.

Wings 3 and 4 have a different type of filters, Stafford said, and LANL is "looking at upgrading both of those systems in the next couple of years."

He said wing 3's upgrade — with \$3 million in new filters — could come in fiscal year 1992-93. The schedule for wing 4 is uncertain. If the SNM is built, he said, wing 4 could be refurbished for uses not involving radioactive materials and not requiring HEPA filters.

Wing 9 is a more recent part of the building, and it has HEPA filters. Wing 1 is an administrative wing.

and Environment Division.

HSE moved promptly to contact the others and check their homes, cars and associates.

Asked if subsequent investigation showed any hazard to the people who left the building or to their associates, Stafford said, "No. Not to the people who left or the people they came in contact with ... There weren't any detected health effects to any of the employees...."

• In 1982, an incident occurred that involved one person who allegedly took materials from a laboratory and contaminated his own locker, subsequently contending that others had been responsible.

Stafford said, "We decontaminated him that day." No one's health was adversely affected, Stafford said.

The man is no longer with the laboratory.

Phillips said, "He was not following established procedures."

The Monitor asked why CMR uses a self-monitoring approach, susceptible to certain human failings, rather than employing staff members assigned to monitor everyone who leaves the building.

Phillips said, "Wherever you work, you have to hire good people; you have to train them, and you have to trust them."

Training, he said, is emphasized.

Stafford pointed to the portals as some protection.

Both said that self-monitoring is the standard procedure at virtually all lab sites. It would be more expensive than risk-benefit analysis supports to hire special people, they said.

"We handle very small quantities" of radioactive material, Phillips added. "We're not a plutonium-producing facility ... Our (thermo-luminescent dosimeter averaged) exposures are extremely low."

Stafford said, for example, that of 89 CLS-1 people in CMR who wore TLDs in 1990, 77 had zero exposures. The highest exposure of the remaining employees was 0.41 rem per year, he said, "one-twelfth of the permissible yearly accumulation."

Neither Phillips nor Stafford sees CMR as a hazard to employees or the public.

There never has been any intention to shut down CMR, the latest SNM budget indicates that approximately \$293.6 million of the \$385 million would go for SNM, and \$91.4 million would go for CMR decontamination and refurbishment. The redone building would be used for a variety of purposes including chemical laboratories.

THOSE DEFICIENCIES...

Meanwhile, the wording of a DOE SNM request to Congress several years ago continues to haunt LANL spokesmen. Monitor news files show that the narrative portion of that request warned that, "Corroded and breached air handling ducts, inadequate supply of filtered air, marginal building-wide filter systems, and inadequate control systems contribute to serious situations developing in the CMR building. A system failure would adversely affect safety of personnel and require shutting down the facility."

The Monitor explored those concerns with Phillips and Stafford.

Phillips said, "The building was very well designed ... in the 1950s."

• Stafford said air flow in each wing of the building is approximately 100,000 cubic feet per minute. Overall, he said, more than 500,000 cubic feet per minute of air is being moved.

Air comes into the offices and laboratories in the building and is sucked into glove boxes (which maintain negative pressure) and then into a system of ducts and on to the basement.

There has been "some deposition" of acid in the duct system over the years, Phillips said, but water is sprayed into the system two to five minutes per day to wash it down. The rinse water flows to the liquid waste treatment facility.

• Corrosion from acid fumes was found in a "couple of places in wings 5 and 3 at joints," Phillips said. Stafford said that the stainless steel ducts were noticeably roughened and had been sealed with a thick paint.

But, Phillips said, "We went back and did ultrasonic testing," measuring the thickness of the metal, and found that, "The ducts had not been breached."

• Stafford said, "Over many years, they put in a number of open-faced hoods." The velocity of air over the opening of a hood must be 125 lineal feet per minute, he said. "As we put in more hoods ... we had to have more air supply..."

As a result, two actions were taken. Phillips said some laboratories were shifted, and CMR made use of an innovative development original-

UPGRADE PLANS

And the current upgrading?

Stafford said that among the projects scheduled for completion in fiscal 1991 are installation of a new stack-monitoring system, and checking of all spray nozzles in the duct wash-down system.

There are 15 items on the full upgrade list, which could stretch as far into the future as 1996.

Asked if he is afraid to work in the building, Phillips said, "No. It's a good building. It's well designed. It's well constructed." In fact, he said, he is familiar with analytical chemistry facilities at a number of DOE sites, and he is convinced that this is one of the best. "It has been maintained well, and we're increasing maintenance," he said.

He noted that the building has passed the point on its "useful life" curve when maintenance must be "proactive" or the quality of the building will drop rapidly. But, he indicated, that proactive approach is being taken.

PERSONNEL MONITORING

And the people in the building?

Phillips and Stafford outlined a self-monitoring system that requires people who work in the laboratories in the interior of the building to monitor themselves four times before they emerge into common areas.

Those who simply enter the laboratory area must conduct three self-monitoring operations before leaving.

All protective clothing — smocks, booties, etc., — remain within the controlled area.

In addition, two portals exist that were installed to safeguard the facility from the removal of radioactive materials.

Although the portals weren't designed for personal safety, Phillips said they are sufficiently sensitive that they will detect for several days the lingering radiation in a person who has had a thallium 208 procedure on his heart and circulatory system or an iodine test on his thyroid.

When the portals detect radioactivity, an alarm sounds.

TWO INCIDENTS...

Two incidents have occurred at CMR that raised concerns about self-monitoring.

• In 1981, a radioactive sample came into the CMR mislabeled "uncontaminated."

Several people left the building after handling the sample. Phillips said those who left without detecting radioactivity "did not adequately monitor themselves."

But one person did a thorough job, detected radiation and reported immediately to the Health, Safety

Lab Made Plutonium For Arms

Los Alamos Radiation Over Current Standard

By John Fleck

JOURNAL STAFF WRITER

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Los Alamos National Laboratory processed large amounts of plutonium in the early 1980s to help meet a surge in U.S. nuclear warhead production, according to recently declassified congressional testimony by Director Sig Hecker.

The work, turning impure plutonium and plutonium scraps into weapons-quality material, exposed laboratory workers to radiation levels that would be unacceptable under current standards, Hecker said at a closed House committee hearing in 1990.

In the process, some of the laboratory's plutonium equipment was used so much it has worn out, according to Los Alamos budget documents made public this week by Concerned Citizens for Nuclear Safety, a Santa Fe-based environmental group.

The documents shed new light on the tightly held secrets of Technical Area 55, the top-security Los Alamos compound where the lab's plutonium work is done. The laboratory has long acknowledged it has produced quantities of plutonium as a byproduct of research that then were turned over to the Department of Energy for use in nuclear weapons.

Hecker's testimony is the first public acknowledgment that such research has involved "full-scale processing of plutonium."

The amount of plutonium that can be processed at the laboratory is secret, but spokesman Bill Heimbach said it is smaller than the capabilities of Rocky Flats, the Colorado factory that processes the plutonium and builds the plutonium parts for U.S. nuclear weapons.

The laboratory inadvertently revealed in a 1981 annual report that it had processed more than 3,000 pounds of plutonium the year before — enough for about 250 bombs the size of that dropped on Nagasaki

MORE: See LAB on PAGE A3

Lab Made Plutonium for Arms

CONTINUED FROM PAGE A1

in World War II.

According to Hecker, the Technical Area 55 plutonium laboratory, completed in the late 1970s, originally was to be used strictly for research.

But Los Alamos wanted to do large-scale research so the lab could develop safer and more efficient plutonium processing techniques, which could then be used at Rocky Flats, where large quantities of plutonium are handled.

That required a laboratory designed "with the capability in mind to do full-scale plutonium processing," Hecker said.

Then, when the Department of Energy faced a plutonium processing crunch in the early 1980s, Los Alamos "sprinted into the breach to help out," Hecker said.

At the time, the United States was building new warheads at a rapid rate, according to Robert S. Norris, a nuclear weapons expert with the Natural Resources Defense Council, a Washington, D.C. environmental group.

"The order book was very full," Norris said.

The result, according to Hecker, was that the Los Alamos plutonium laboratory was operated beyond the

levels that would be permitted by today's stricter DOE safety standards.

"There were a number of things that were done from an operational standpoint that, in today's environment, no longer are acceptable from the standpoint of ... radiation exposures," he told House members.

Hecker did not say how many workers were exposed or if their health was affected. Plutonium in extremely small quantities can cause cancer.

The work also took its toll on the laboratory.

According to the budget documents, the plutonium laboratory "has been used for production, for which it was not designed. One-fourth of its area is worn out and will need to be replaced." The laboratory is still in use, but Los Alamos is asking the DOE for money to replace it.

With Rocky Flats shut because of health and safety problems and nuclear weapons production currently on hold, large-scale plutonium production is not going on anywhere in the country.

But the problems plaguing attempts to restart Rocky Flats and the reduced demand for plutonium resulting from the rapidly shrinking U.S. nuclear arsenal have led to speculation Los Alamos's laboratory could be sufficient to replace Rocky Flats.

Officials at the DOE and Los Alamos say they have no such plan.

ALB. J. 74. 1/18/92

LANL head can't recall testimony

The Associated Press

LOS ALAMOS — The director of Los Alamos National Laboratory says he doesn't recall testifying that workers were exposed to levels of radiation now considered unsafe when the lab processed large amounts of plutonium a decade ago.

The Albuquerque Journal in a copyright story said the lab's involvement in nuclear warhead production in the early 1980s was revealed by director Sig Hecker in testimony to a closed House committee hearing in 1990.

The work involved turning impure plutonium and plutonium scraps into weapons-quality material. As a result, lab workers were exposed to radiation levels that would be unacceptable under current standards, Hecker said at the 1990 congressional hearing.

"There were a number of things that were done from an operational standpoint that, in today's environment, no longer are acceptable from the standpoint of ... radiation exposure," Hecker told House members.

The Albuquerque Journal said Hecker did not state how many workers were exposed or if their health was affected.

Plutonium in extremely small quantities can cause cancer.

But Hecker said Saturday he didn't recall the House testimony. He said he testifies before Congress six or seven times a year in both closed and open forums.

"To my knowledge, I know of no workers' exposure beyond that (federal radiation exposure limit of 5 rems per year)," Hecker said. A rem is a unit that measures radiation exposure to the entire body.

"We ourselves have implemented a stricter standard for our workers," he said.

Hecker said the lab has, since the 1980s, reduced the amount to which a worker can be exposed to 2 rems per year.

"In addition, we have introduced a number of measures in the processing to keep exposure levels ALARA (as low as reasonably achievable) standards," he said.

Hecker's 1990 testimony, the newspaper reported, is the first public acknowledgement that such research has involved "full-scale processing of plutonium."

The lab "sprinted into the breach to help out," when the Department of Energy faced a plutonium processing crunch in the early 1980s, Hecker testified.

At the time, the U.S. was

building new warheads at a rapid rate, according to Robert S. Norris, a nuclear weapons expert with the Natural Resources Defense Council, a Washington, D.C. environmental group.

"The order book was very full," Norris said.

The work, according to Los Alamos budget documents made public this week by Concerned Citizens for Nuclear Safety, a Santa Fe-based environmental group, wore out some of the laboratory's plutonium equipment.

According to the documents, the plutonium laboratory "has been used for production for which it was not designed. One-fourth of its area is worn out and will need to be replaced."

Alb. J. n. C. 44492 7/4/92

Los Alamos To Gain Leading Role in N-Bomb

By John Fleck

JOURNAL STAFF WRITER

The Department of Energy, carving up responsibility for the technology used to build nuclear bombs, is preparing to give Los Alamos major new responsibilities over the nation's bomb factories of the 21st century.

The nation's other two nuclear weapons laboratories, Sandia in Albuquerque and Lawrence Livermore in California, will also be

winners under the plan, which expands the three labs' roles in planning for future manufacturing done in bomb factories around the country, lab officials say.

Faced with the task of scrapping most of its aging bomb factories, the Energy Department is asking the labs to take a central role in designing the nuclear weapons plants of the future.

It is too early to attach budget figures to the plan, but in the division of labor now under final

consideration at Department of Energy headquarters in Washington, Los Alamos gets the biggest share of the work.

And with post-Cold War budgets for designing nuclear bombs shrinking, the new work will help offset cuts, officials at all three labs said.

The plan also signals a continued DOE commitment to keeping all three laboratories working on nuclear weapons, despite pressure

from critics who say having three nuclear weapons labs is a luxury the United States can no longer afford.

"I think that what the administration and Congress are trying to do in the nuclear weapons area, and the entire defense area, is protect the research and development capability," said Ron Cochran, chief executive officer at Lawrence Livermore National Laboratory, in a telephone interview Thursday from his California office.

In particular, the plan splits re-

sponsibility for future plutonium research and development between Lawrence Livermore and Los Alamos. Some critics, including prominent California Democratic Congressman George Brown, have called for all plutonium work to be moved to Los Alamos.

"People wanted to maintain technical competence in this area at both laboratories," said Los Alamos Director Sig Hecker, who with his counterparts at the other two laboratories helped draw up the division

Factories

of labor now awaiting final DOE approval.

The plan carves up the nuclear weapons turf, assigning "lead laboratories" to coordinate work on each of nine main technologies needed to build nuclear bombs.

Lead laboratories will coordinate the research and development needed to build the new factories, then oversee construction and start-up.

Los Alamos will get five of the nine areas, with Sandia and Lawrence Livermore taking charge of two each.

Responsibility in a 10th area, safe cleanup and storage of the plutonium left over from years of U.S. nuclear weapons work, will also go to Los Alamos.

That will not mean moving workers from lab to lab, officials said.

Instead, lead laboratories will coordinate work done by researchers spread out among the laboratories.

Despite the fact that no workers will be moved now under the plan, one analyst following the discussions said Los Alamos is headed toward garnering the largest share of future work.

"It seems evident that Los Alamos is getting a broader responsibility for a larger area of work than the other two labs," said Tom Zamora, a Washington, D.C., writer and nuclear weapons analyst for the environmental group Friends of the Earth.

The plan should become final by late July, and no major changes are expected between now and then, according to a Department of Energy source involved in the plan's approval who spoke on condition of anonymity.

Work in the assigned roles would begin soon after, in preparation for the planned August 1993 completion of preliminary plans for the new nuclear weapons complex, but some of the work is already under way, laboratory officials said.

Congressional approval is not required.

The plan sketches a significantly larger role for the laboratories in overseeing nuclear weapons production than they have held in the past.

"We'll be much more involved," said Harry Saxton, director of Sandia's Manufacturing Engineering and Support Center.

That is consistent with a growing trend in U.S. industry toward having designers for major high-tech products work more closely with the people who have to build them.

Under the proposed division of labor, Los Alamos will be in charge of all processing of the key chemicals used to make a nuclear bomb, including plutonium, uranium, tritium and lithium.

THE ROLES

Lead laboratory roles the Department of Energy is assigning to the three U.S. nuclear weapons laboratories:

Los Alamos National Laboratory:

- Tritium (used in hydrogen bombs)
- Uranium
- Lithium (used in hydrogen bombs)
- Plutonium processing
- Plutonium disassembly and storage
- Nuclear subassemblies (the nuclear parts within a bomb)

Sandia National Laboratories:

- Non-nuclear components
- Overall bomb assembly

Lawrence Livermore National Laboratory:

- Plutonium manufacturing
- High explosives

DOE team to visit ^{8/16/92} laboratory

Monitor Staff Report

Donald F. Knuth, Department of Energy deputy assistant secretary for facilities, will visit Los Alamos National Laboratory this week.

Knuth will be accompanied by: Daniel R. Rhoades, director of the DOE Office of Research, Development and Technology; Roger L. Dintaman, director of the Sandia National Laboratories/LANL Facilities Division; Edward G. Lazur, director of the Office of Construction and Capital Projects; William Hensley, director of the Office of Field Security and Oversight; and Theodore H. Koch of SAIC.

LANL's Dennis J. Erickson will welcome them.

On Monday, they will be briefed on LANL conduct of operations by Michael T. Terry and Joan M. Boudreau; on seismic conditions by M. Dean Keller; on the Working Group to Address Los Alamos Community Health Concerns by Harry Otway; and on Technical Area 21 by Alexander Gancarz, Raymond Garde and Phillip Eller.

On Tuesday, they will hold discussions with senior management members including LANL Director Sig Hecker; Eugene M. Wewerka; Erickson; Allen J. Tiedman; Michael G. Stevenson; and Sharon R. Eklund.

They also will tour the Chemistry and Metallurgy Research Building with Allen Hartford and Jim Phoenix; and they will tour the Plutonium Facility with Delbert H. Harbur and Annell Danczyk.

On Wednesday, they will visit the high-explosive facilities and high-pressure tritium laboratory at Technical Area 33 with George G. Hill, Earle Marie Hanson and Rudy Valdez; Technical Area 18 with Richard Malenfant, Christopher M. Steele, and others; and the Los Alamos Area Office of the DOE.

The closeout will be led by technical host John M. Puckett

DOE Eyes Los Alamos Lab for Plutonium Work

By John Fleck

JOURNAL STAFF WRITER

When a Department of Energy team convened in January to consider the future of U.S. plutonium supplies, it faced a simple fact: Los Alamos National Laboratory is the most capable plutonium-handling site in the country.

Los Alamos can store plutonium, process the substance and make nuclear bomb parts out of it, according to a report from the January meeting.

And the DOE is considering Los Alamos

as the location for all three of those jobs, the report said.

While non-government experts have long contended Los Alamos was a likely candidate for the plutonium work, the task force report is the first DOE acknowledgment that such a possibility is under active consideration.

A move toward nuclear weapons production work could shift the New Mexico laboratory away from its traditional research and development role, the report acknowledged.

Los Alamos officials repeatedly have said

they oppose such a shift.

But faced with a surplus of plutonium and a shortage of options, the DOE may have no choice but to turn to Los Alamos, said Brian Costner, a South Carolina environmentalist and author of a separate, independent study of U.S. plutonium operations.

It will be months before the Energy Department makes public its plutonium plans.

Agency officials have not responded to written questions about their deliberations.

But the report from the January meeting of the DOE's Plutonium Strategy Task

Force Steering Committee, along with other documents recently made public, shed light on the agency's thinking.

What they spell out is that Los Alamos plays a central role in that thinking.

With no current plans to build more nuclear weapons, the DOE is scrambling to decide what to do with plutonium already made for bomb production.

Used at the heart of nuclear bombs, plutonium is a metal made in nuclear

MORE: See DOE on PAGE A5

DOE Eyes Los Alamos for Plutonium Work

CONTINUED FROM PAGE A1

reactors and not found in nature. It is valued by bomb designers because it can release enormous nuclear forces when rapidly compressed by high explosives.

It also is extremely toxic, and nuclear weapons workers only handle it remotely, in sealed boxes with glove holes in the side called "glove boxes."

The size of the excess plutonium stockpile is secret, and all specific numbers were deleted from the copy of the report obtained by the Journal.

But most of the excess plutonium is believed to be in storage vaults at the department's Rocky Flats plant near Denver, according to Costner.

With the DOE closing Rocky Flats, the agency is faced with the question of where to send that plutonium.

The Rocky Flats closure also leaves the Energy Department without a place to do the plutonium processing necessary to build parts for nuclear bombs if the need arises in the near future.

The dominant option is Los Alamos, the plutonium task force report concluded.

On the question of storage, Los Alamos has by far the largest available plutonium storage capac-

ity in the nation — enough room for 60 tons in a new complex called the Nuclear Materials Storage Facility.

The next largest available storage site is an aging vault complex at Hanford Nuclear Reservation in Washington, with room for 20 tons.

The Energy Department's Savannah River Site in South Carolina, considered by Costner to be another leading candidate for storage, has room for little more than half a ton of plutonium, according to the report.

"It really dwarfs everything else," environmental engineer Jim Werner of the Natural Resources Defense Council said of Los Alamos' storage capacity.

Filling Los Alamos' vaults could take 250 or more truck trips, with the plutonium to be shipped in the same 18-wheelers used to ferry nuclear warheads around the country.

The vaults would have to be modified before they could store the Rocky Flats plutonium, but the work could be completed by 1995, according to the report.

That dovetails with the timeframe set out in the DOE's plan for the future of Rocky Flats, which envisions keeping the plutonium at the Colorado plant until 1995, while it decides where to store the plutonium from around the country.

On the question of processing

plutonium, which is necessary to prepare it for building nuclear bombs and to convert it into stable chemical mixes for storage, Los Alamos' abilities are matched only by Savannah River's, according to the report.

In addition, the Energy Department faces a decision on where to manufacture plutonium bomb parts if the need arises over the next decade.

For now, the Energy Department plans to keep two buildings at Rocky Flats in a "stand-by" capacity to build plutonium bomb parts if called upon. But the DOE, in a July report to Congress, says it will maintain that capability only until sometime next year.

After that, one option is to assign a "limited production" role to Los Alamos so the United States could maintain its ability to produce new nuclear weapons, according to the DOE task force report.

The only other option considered in the report is to retain backup production abilities at Rocky Flats for the next decade or longer, an option Costner said would be difficult to sell to Congress with Los Alamos waiting in the wings.

In the long run, the Energy Department plans to build a new Rocky Flats-type plant, to be completed sometime early in the next century.

ABQ JRNL
8-17-92

DOE considering plutonium work at Los Alamos

8/18/92
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LOS ALAMOS (AP) — A Department of Energy team says the agency is considering Los Alamos National Laboratory as a site to store and process plutonium and make nuclear bomb parts.

The team's report is the first Energy Department acknowledgement that Los Alamos is a likely candidate for the plutonium work.

The report said a move toward nuclear weapons production work could shift the lab away from its traditional research and development role.

LANL officials have said they oppose such a shift.

But Brian Costner, a South Carolina environmentalist and author of a separate, independent study of U.S. plutonium plans, said the Energy Department, faced with a surplus of plutonium and a shortage of options, might have to turn to Los Alamos.

It will be months before the Energy Department makes public its plutonium plans.

The report from the January meeting of the department's Plutonium Strategy Task Force Steering Committee indicates Los Alamos plays a central role in the agency's thinking.

The Energy Department is trying to decide what to do with plutonium already made for bomb production now that there are no current plans to build more nuclear weapons.

Plutonium is a metal made in nuclear reactors that is valued by bomb designers because it can release enormous nuclear forces when rapidly compressed by high explosives.

It also is extremely toxic.

The size of the excess plutonium stockpile is secret.

Costner said most of the excess plutonium is believed to be in storage vaults at the Rocky Flats plant near Denver.

With the closure of Rocky Flats, the Energy Department is faced with the question of where to send the plutonium.

And the closure leaves the department without a place to process plutonium needed to build parts of nuclear bombs if the need arises in the near future.

The task force concluded the dominant option is Los Alamos.

The lab has by far the largest available plutonium storage capacity in the nation — enough room for 60 tons in a new complex called the Nuclear Materials Storage Facility. The next largest storage site is an aging vault complex at Hanford Nuclear Reservation in Washington, with room for 20 tons.

The report said Los Alamos' vaults could be modified by 1995 to store the Rocky Flats plutonium.

The Energy Department's plan for Rocky Flats envisions keeping the plutonium there until 1995.

Los Alamos' abilities to process plutonium are matched only by the Energy Department's Savannah River Site in South Carolina, the report said.

The department also needs to decide where to manufacture plutonium bomb parts if the need arises in

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PLUTONIUM

(from Page 1)

the next decade.

It plans to keep two buildings at Rocky Flats in a standby capacity until sometime next year to build plutonium bomb parts if called upon.

After that, one option is to assign a "limited production" role to Los Alamos so the United States could maintain its ability to produce new nuclear weapons, the report said.

The only other option considered in the report is to keep backup pro-

duction abilities at Rocky Flats for the next decade or longer.

In the long run, the Energy Department plans to build a new Rocky Flats-type plant to be ready early in the next century.

Another clue to the department's plans came in a recent environmental report that says plutonium-processing laboratories at Los Alamos should be upgraded "to allow curtailment of plutonium operations at the Rocky Flats plant."

8/19/92

DOE Verifies Lab May Get Plutonium

By John Fleck

JOURNAL STAFF WRITER

The head of the Energy Department's environmental programs confirmed Tuesday that the DOE is considering Los Alamos National Laboratory as a backup site for plutonium work required to build nuclear weapons.

At a news conference in Albuquerque, Assistant Energy Secretary Leo Duffy acknowledged that Los Alamos is one of five sites across the country that could be designated as a backup plutonium production site for nuclear weapons by as early as next summer.

The other sites are at Savannah River, S.C.; Hanford, Wash.; Oak Ridge, Tenn.; and the Rocky Flats Plant near Denver.

Of those five sites, Los Alamos has the most complete plutonium handling, processing and storage capabilities, Energy Department documents show.

It is the only place among the five

MORE: See DOE on PAGE A3

any shift to, production work, but left the door open to the possibility.

"We are a research and development facility and have no interest in going into the production business," he said Tuesday. "On the other hand, we realize that Los Alamos National Laboratory's facilities are owned by the Department of Energy and they have a final say on our mission."

The University of California, which manages Los Alamos for the Energy Department, also objects to production-scale plutonium processing and the manufacture of bomb parts at Los Alamos, a university official said this week.

with the current capability to build plutonium "pits," the radioactive metal spheres at the heart of nuclear weapons.

A sixth option, to leave the nation with no nuclear weapons production capability until a new, permanent factory is built sometime after the turn of the century, will also be considered, Duffy said.

Los Alamos is not a candidate site for the new permanent plutonium plant.

Los Alamos spokesman Bill Heimbach said the laboratory opposes

"The university has taken the stance all along that it doesn't get in the business of manufacturing nuclear weapons," said Tommy Ambrose, head of the university's Office of Laboratory Affairs.

But Ambrose did say the university could turn over management of weapons production to a private company.

The question of where to build plutonium parts for nuclear weapons arose after the Energy Department's Rocky Flats Plant in Colorado, where the work was done in the past, was closed because of environmental and safety problems.

One option would be to retain two buildings at Rocky Flats in a "cold standby" status to build plutonium bomb parts, meaning they could be ready to build bomb parts within three to five years' notice, according to the Energy Department.

Other plutonium work, including storage of plutonium being cleaned out of Rocky Flats and large-scale chemical processing of plutonium, is also being considered for Los Alamos, according to the Energy Department documents.

Duffy confirmed that plutonium processing is also being considered for Los Alamos, but would not comment on plutonium storage.

Ambrose said the University of California has not taken a position on the question of storing plutonium removed from Rocky Flats at Los Alamos.

The possibility of plutonium production work or storage at Los Alamos drew criticism from others this week.

"Los Alamos is a research facility, and that's what I think it needs to remain," said Sen. Jeff Bingaman, D-N.M., in a telephone interview.

Bingaman said he would object to any attempt to expand Los Alamos' mission to plutonium storage and processing or production of nuclear weapons parts.

Many New Mexico residents apparently agree, according to an opinion poll conducted in March.

The survey, conducted for Los Alamos National Laboratory by the University of New Mexico Institute for Public Policy, found 51 percent of New Mexicans polled opposed the idea of expanded nuclear weapons work at Los Alamos, said laboratory spokesman Heimbach.

Thirty-six percent of the 557 New Mexicans surveyed supported expansion of Los Alamos' nuclear weapons work, Heimbach said. The poll's margin of error was plus or minus 5 percentage points.

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DOE Confirms Los Alamos Lab Could Get Plutonium Work

CONTINUED FROM PAGE A1

State's ^{8/19/92} warhead number on rise

By KEITH EASTHOUSE
The New Mexican

The number of nuclear warheads stored in New Mexico has jumped from 410 in 1985 to 2,090 today, according to a report that will be published next month in *The Bulletin of Atomic Scientists*.

No other state in the country is home to as many nuclear weapons, except South Carolina, which has 2,258, the report said.

■ **WHAT IF?:** If the United States decides it needs more nuclear warheads, LANL probably would shift from designing bombs to building them, a member of an environmental watchdog group says.

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However, the number of warheads in New Mexico is expected to decline to 150 by the year 2000 as the U.S. dismantles its arsenal in the wake of the Cold War.

The information also is contained in a 33-page study called "Taking Stock: U.S. Nuclear Deployments at the End of the Cold War." The study was released this month by the environmental groups Greenpeace and the Natural Resources Defense Council.

Most of the nuclear weapons in New Mexico are stored at Albuquerque's Kirtland Air Force Base. Other weapons are stored just outside Albuquerque in Manzano Mountain, formerly called Manzano Base, an old Air Force storage depot now being used by the Energy Department.

The report also said nuclear warhead prototypes are stored at Los Alamos National Laboratory.

The weapons at Kirtland include nuclear-tipped artillery shells and short-range nuclear warheads, the report said.

The reason for the increase in weapons stored in New Mexico is a massive shift of nuclear weapons from overseas — particularly Europe — to the United States. The weapons are being brought home to be stored and eventually dismantled as the Cold War ends.

South Carolina and New Mexico

Please see **WARHEADS**, Page A-2

Report: LANL could make bombs

By KEITH EASTHOUSE
The New Mexican

If the United States were to resume building nuclear warheads, Los Alamos National Laboratory would probably shift from designing bombs to building them, a member of an environmental watchdog group said Tuesday.

If that happened, the chance of lab operations contaminating the environment could increase, because production work requires large quantities of plutonium — the highly radioactive metal used to trigger nuclear explosions.

"Probably the most important question is will the U.S. need new warheads in the future," said Brian Costner of the Energy Research Foundation of Columbia, S.C.

With the end of the Cold War, the U.S. has stopped building new nuclear weapons and is reducing its stockpile. But there is always the possibility production could resume if Russia or some other country is perceived as a sufficient threat.

In the absence of such a threat, Costner said, the U.S. Department of Energy may decide to leave its excess plutonium supplies — the plutonium that has not yet been put in warheads — where they are. That stockpile is primarily at the Rocky Flats plant near Denver.

But in the face of a military threat, Costner said the plutonium supplies — or a portion of them — are likely to be shipped to Los Alamos, where they could be used to fabricate plutonium "pits" that trigger nuclear explosions.

Costner said the fact that the lab has been involved in nuclear weapons production before — in the 1940s and early 1950s,

and again in the 1980s — increases the likelihood it could happen again.

A LANL official said the lab does not want to become involved in nuclear weapons production.

"Our position is that we are an R&D facility and that we're not interested in getting into production work," said Bill Heimbach. "We're not interested in becoming Fort Plutonium."

Plutonium may be shipped to Los Alamos regardless of the international situation or the desires of laboratory officials.

In a January report by a DOE task force, Los Alamos was identified as a possible interim plutonium storage and processing facility until a permanent facility is built.

Previously, plutonium storage and processing and plutonium pit fabrication all took place at Rocky Flats. But the DOE is in the process of closing the plant, which has been plagued with environmental and worker safety problems.

Only two options were cited in the task force report regarding building plutonium bomb parts over the next decade or so: retain production capabilities at Rocky Flats or convert Los Alamos into a "limited production" facility.

The report contrasts with a statement made by Energy Secretary James D. Watkins at a press conference in Los Alamos two years ago, when he said he had "no intention to even consider" transferring plutonium production functions from Rocky Flats to Los Alamos.

Los Alamos is not under consideration as a permanent replacement to Rocky Flats. Such a facility would take 10 years to complete and cost between \$6 billion and \$10 billion. The DOE is considering five sites

for the facility, according to Richard Claytor, assistant secretary for defense programs.

Costner and Jim Werner of the Natural Resources Defense Council in Washington D.C., co-wrote a recently released report titled *Rethinking Plutonium: A Review of Plutonium Operations in the U.S. Nuclear Weapons Complex*.

Instead of fabricating plutonium pits Werner said, the DOE could re-use existing plutonium pits in nuclear weapons stored at the DOE's Pantex Plant in Texas.

But Werner said if the DOE decides that is not feasible, and if the U.S. sees a need to build new nuclear weapons, he agrees with Costner that Los Alamos could find itself in the bomb production business.

WARHEADS

Continued from Page A-1

have more nuclear weapons than other states because they contain the nation's two major storage depots for nuclear weapons: Kirtland and the Naval Weapons Station in Charleston, S.C.

The stockpile at Kirtland should begin to decline shortly as warheads are shipped to the DOE's PANTEX plant outside Amarillo, Tex., where they will be dismantled.

Beginning in October, 2,000 warheads a year — or seven a day — will be disassembled at the PANTEX plant, the report said.

By the year 2000, when the bulk of the dismantlement will be complete, New Mexico will be one of only 17 states with nuclear weapons, the report said.

↑ NM warheads 1985 = 410
" " 1992 = 2090 !

8-19-92 Santa Fe New Mexican

Groups: DOE wants plutonium at LANL

By KEITH EASTHOUSE
The New Mexican

A coalition of 20 environmental groups from across the country say the U.S. Department of Energy is not adequately informing the public on how it plans to manage vast quantities of nuclear weapons materials left over from the Cold War.

In a letter to Energy Secretary James D. Watkins dated Aug. 21, the coalition — which includes Santa Fe's Concerned Citizens for Nuclear Safety — charges the agency with failing to involve the public in making decisions about the storage and long-term management of an estimated 100 tons of plutonium and 500 tons of highly en-

riched uranium.

The bulk of the material is in warheads being returned to the United States for eventual disassembly at DOE's Pantex Plant in Amarillo, Tex. The DOE plans to keep the plutonium from retired warheads at the Texas facility until long-term plans are developed.

Plutonium also is located at several other DOE facilities, including Los Alamos National Laboratory.

In a May 20 memo, Richard Claytor, assistant secretary for defense programs, asked LANL officials to explore the potential for storing plutonium from DOE's Rocky Flats plant and the Lawrence Livermore National Laboratory in California at Los Alamos.

LANL officials are opposed

to having the laboratory serve as a plutonium storehouse. They also have expressed opposition to the possibility that the lab could replace Rocky Flats as a plutonium processing and production facility.

Such facilities pose a much greater hazard to the environment because they require the handling of large quantities of plutonium.

John Stroud of CCNS said unless the Energy Department starts providing the public with more information about its intentions, "we will soon be presented with a *fait accompli*."

"If (DOE) is allowed to make decisions behind closed doors, we will have Fort Plutonium (at Los Alamos) before we know it," Stroud said.

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.

Lab built plutonium battery cores

Los Alamos
Monitor
1/22/92

By The Associated Press

Los Alamos National Laboratory produced plutonium battery cores for nuclear warheads from 1980 to 1990, a lab spokesman said.

Spokesman Jim Danneskiold said Friday the lab built the cores for less than 4,000 batteries.

Information about the battery cores and the lab's role in building them has been unclassified for several years but has never been made public, officials said.

Lab officials have consistently said the laboratory does only nuclear weapons research and design work.

But Danneskiold said the lab's production of very small pieces of weapons doesn't mean the lab is a "bomb factory."

Danneskiold said no DOE facility is making the parts any more, since no new nuclear weapons are being produced.

"Every process in the nuclear weapons complex has been done at Los Alamos (National Laboratory) at one time or another," he said, since the lab researched and designed the processes.

"It's only logical" that the lab function "in a backup capacity" with the closing of the Rocky Flats production center in Colorado, he added.

It was disclosed earlier this year that the laboratory was involved in large-scale processing of plutonium for nuclear weapons in the early 1980s.

The batteries are called radioisotope thermoelectric generators, or RTGs, and were built at the Energy Department's Pinellas plant near St.

Petersburg, Fla., Danneskiold said.

The lab's manufacture of the plutonium cores demonstrates that it has taken part in building nuclear bombs, said Brian Costner of the Energy Research Foundation, an environmental research group based in Columbia, S.C.

John Stroud of the Santa Fe-based Concerned Citizens for Nuclear Safety agreed.

"It's extremely distressing to find we can't put any credibility in the statements of lab management, particularly at such a critical time for the future of the lab and the region," Stroud said.

Danneskiold said, "obviously we're producing something, but it is not something solely used for

(Please see CORES, Page A-8)

nuclear weapons."

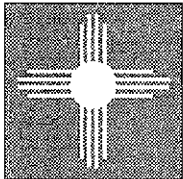
He said the laboratory has been involved in producing RTG plutonium cores since the 1960s as a power source for a number of non-weapons projects, including NASA spacecraft and satellites that verify nuclear arms treaties.

Danneskiold said that before 1980, the RTG cores for nuclear weapons were made at the Energy Department's Mound plant in Ohio. He said he did not know why the work was transferred to Los Alamos.

The last plutonium core was produced at LANL in 1990 and "there are no current plans to make RTG's for weapons again anywhere in the DOE complex," Danneskiold said.

Steven Aftergood of the Federation of American Scientists, a research and advocacy group in Washington, D.C., said the plutonium cores built by LANL produce heat which is converted by the battery into electricity.

The energy produced by the battery does not have anything directly to do with detonating the warhead, Aftergood said.



SANTA FE/REGION

DOE will send plutonium cores to Los Alamos lab

By KEITH EASTHOUSE *12/15/ka*
The New Mexican

Plutonium cores used to evaluate the condition of nuclear warheads will be shipped from the Department of Energy's Rocky Flats weapons plant outside Denver to Los Alamos National Laboratory, according to a DOE report.

The shipment of the cores, called "surveillance pits," will not happen for at least three years, according to LANL spokesman Jim Danneskiold.

Nonetheless, the planned shipment of the cores for storage and use at Los Alamos is the latest indication that the lab is taking over some of the functions once performed at Rocky Flats, a nuclear weapons production facility shut down because of pollu-

tion and safety problems.

Last month, an internal Energy Department memo was made public disclosing that the Energy Department intends to designate LANL as a manufacturing site for non-nuclear parts in nuclear weapons. The parts had been made at Rocky Flats.

The report, dated Oct. 1, is called the Mission Transition Program Management Plan. It did not specify how many surveillance pits will be sent to LANL or how much plutonium each pit contains.

Danneskiold declined to disclose how many surveillance pits would be sent to LANL.

John Stroud of Concerned Citizens for Nuclear Safety, a local environmental group, said the shipment plan is evidence that "LANL is in active

transition into (nuclear weapons) production activity.

"This is happening without any opportunity for public comment or influence on decisions that could dramatically affect the safety, security and environmental hazards of operations at LANL," Stroud said.

Danneskiold said no new functions are being transferred to the lab. He said the lab has used surveillance pits to evaluate nuclear weapons stockpiles in the past. He also said that the lab has maintained a regular program of direct inspection of nuclear warheads.

He said stockpile evaluation is a natural function for LANL, a nuclear weapons research and design facility. He said it is not evidence that the lab is becoming involved in nuclear

weapons production, which carries a greater risk of radiation exposure to workers and environmental contamination.

"We consider the study of the capability of various weapons components and the effects of aging on these components to be (research and development)," Danneskiold said.

"Since Rocky Flats shut down, the lab has expected there would be an increase in stockpile evaluation activities because Rocky Flats was doing similar things" in those areas, Danneskiold said.

He said a surveillance pit is a replica of the plutonium core used in a warhead to initiate the chain reaction that sets off a nuclear explosion.

Surveillance pits are inspected on a periodic basis to assess how pluto-

onium pits in warheads are aging.

The advantage of surveillance pits, which are inspected through X-rays and other techniques, is that they can be examined without having to dismantle a warhead.

"These units have never been used in warheads and were never intended to be used in warheads," Danneskiold said. "They're like spare parts made so inspections could be performed."

The report says the surveillance pits will remain at Rocky Flats "until LANL is ready to receive them."

Danneskiold said LANL would not be ready to receive the pits until a planned \$17.5 million upgrade of the lab's Nuclear Materials Storage Facility is completed.

The upgrade is on hold because of a lack of funding, he said.

N.M. Labs May Build N-Weapons

By John Fleck 12/13/92

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.