2023 General

Northern New Mexico Citizens' Advisory Board
to the
Department of Energy/Los Alamos National Laboratory
Meeting Agenda

August 13, 1996
Coronado Hall,
Taos, New Mexico

I. Call to Order - Bernadette Chavira-Merriman
   1. Welcome
   2. Approval of Agenda
   3. Approval of Minutes, July 9, 1996

II. Presentations to the Board

III. Public Comments

IV. Break

V. Old Business

   1. Hiring process for CAB Support, Orlando Arellano
   2. Approval for Recommendations Process, Bob Castille
   3. Review Proposed Amendment to Operating Procedures, Carl Tsosie

VI. New Business

   1. Plans for CAB Retreat, Carl Tsosie
      Date: September 27 - 29
      Location: Durango, CO
   2. Subcommittee Reports
      A. Environmental Management — Hank Daneman
      B. Individual Issues — Robert Castille
      C. Executive Committee — Carl Tsosie
      D. Science Education/Public Participation — Dolores Salazar

VII. Adjourn

12848

V 3

Proposed Amendment to the Operating Procedures of the New Mexico Citizens' Advisory Board to the Department of Energy on Los Alamos National Laboratory
July 9, 1997

Moved by: Carl Tsosie

Seconded by: _____

Passed: _____

A new paragraph would be added to the OPERATING PROCEDURES under "Ground Rules, Filling Vacancies" that reads:

> "A standing subcommittee will be established to generate and maintain a pool of candidates to fill vacancies and recommend candidates to the CAB. The CAB will, by formal action, propose members to DOE for appointment."

The paragraph under OPERATING PROCEDURES under "Membership" would be amended as follows: (Deletion are indicated by [ ] and additions are bolded.)

The Board's occupational/professional diversity includes the following representation:

Medical/public health professionals
Elected or appointed government officials
Local Tribal members
Business owners or industry representatives
LANL employees or labor organization representatives
[Regional citizen], Environmental, **civic and advocacy** groups
Teachers
Students

Agriculture
Retirees/Senior Citizens
Citizens' at large
Women's Organizations
Barrios
County Government
Cultures

Other criteria include: age, geographic area, knowledge of issues, **and occupation or** technical background. All Board members must be team players, with skills and attitudes to work together.

This amendment would also approve moving the above paragraph from its current location under "Ex-officio Membership" to the heading "Diversity".

VI 1

July 30, 1996

Memorandum

To: CAB Members and Ex-Officio Members

From: Carmen M. Rodriguez for Sarah Atencio, Carl Tsosie, and Ian Aeby, CAB Retreat Committee

Subject: 1996 Northern New Mexico Citizens' Advisory Board Retreat - September 27/28/29, 1996

Per the request of the CAB members who were present at the CAB Work session meeting on the afternoon of July 13th, the attached is a draft proposal of the CAB Retreat Schedule that is tentatively scheduled for September 27-29, 1996, at the Tamarron Hotel in Durango, Colorado.

The purpose of the CAB Retreat is to accomplish the following:

- Establish a solid relationship among the CAB members
- Establish values and structure of the CAB
- Improve productivity of the CAB
- Determine what topics will be championed in FY 1997.

Please review the attached draft proposal and be ready to discuss your thoughts and suggestions at the CAB meeting in Taos on August 13th.

The deadline to hold reservations at the reserved price at the hotel is August 23, 1996. If the retreat is approved, please submit your travel authorization to Ann Dubois by August 23, 1996, so she can begin the process.

BUDGET INFORMATION FOR CAB RETREAT

If the CAB members and participants submit their travel requests and authorization to Ann Dubois by THE DEADLINE OF AUGUST 23, 1996, Ann will be able to prepare the necessary paperwork and get everything approved and taken care of out of the FY 1996 budget.

1) **HOTEL EXPENSES**

   a) Lodging for all CAB members and Ex-Officio members
   b) Lodging for Ann Dubois, Project Leader DOE CAB Support
   c) All meals for participating members
   d) All conference expenses, including audio visual, etc.
   e) **What else??**
   f)
   g)

2) **PROFESSIONAL FACILITATOR'S EXPENSE**

   a) Professional services of professional facilitator in charge of the CAB Retreat formation and process results
   b) Lodging costs for professional facilitator

   c) **What else??**

3) **OTHER EXPENSES**

   a) Other People? Suggestion: Al Alm, DOE Assistant Secretary for banquet speaker?, Cindy Kelly? **These names are merely suggestions!!**

   b) A motivational speaker for banquet? **Just a suggestion. If so, whom are you thinking about?**

   c) **Do you want the CAB retreat video-taped? YES? or NO?**

SUNDAY, SEPTEMBER 29, 1996

6:00 a.m. - 7:00 a.m.	Coffee available in lobby of hotel
8:00 a.m. - 9:00 a.m.	Breakfast in the CAB Conference Room
9:00 a.m. - 10:15 a.m.	CAB Work Session (TO BE DEVELOPED)
10:15 a.m. - 10:30 a.m.	Break
10:30 a.m. - 12:00 p.m.	Cab Work Session (TO BE DEVELOPED)
12:00 p.m. - 1:00 p.m.	CAB Working Lunch Session
1:00 p. m. - 2:30 p.m.	Conclusion and Adjourn of CAB Retreat
3:00 p.m.	CAB Participants Return Home

CAB SEPTEMBER 1996 RETREAT INFORMATION - QUESTIONS

ANYTHING FUN ON THE SCHEDULE?

The team building exercises should be fun.

Additionally, there is some time allowed on Saturday evening after the dinner/banquet if people are interested in driving into the city limits of Durango; it is only 20 miles away.

DO YOU WANT A SPEAKER FOR THE SATURDAY DINNER or BANQUET?

What about a motivational speaker for approximately 30 minutes? What would you want the topic to be? Any suggestions as to who the speaker should be??

What about Al Alm, Assistant Secretary for Environmental Management at DOE Headquarters? Do you want him to participate? What would be his topic?

WHAT ELSE????

QUESTIONS???

COMMENTS....

ADDITIONS....

DELETIONS....

OTHER SUGGESTIONS???

FOR YOUR INFORMATION - HOTEL INFORMATION:
Tamarron Hilton Resort (Greg Rice is our contact there)
40292 U. S. Highway, 550 North
Durango, Colorado 81301
1-800-678-1000

VI 2 D

TO: Department of Energy

FROM: Citizen's Advisory Board

RE: ACCIDENT PROCESS

The Citizen's Advisory Board (CAB) recommends that the Department of Energy (DOE), the Los Alamos National Laboratory (LANL), JCI, and other subcontractors review and change their current processes (concerning notification and keeping the individual(s) and/or relatives informed) followed after an accident.

When an accident occurs, the process should immediately involve the individual(s) injured and/or the family(ies). DOE, LANL, and subcontractors should communicate any events resulting from the accident to the individuals affected and advise them of any action being taken (i.e., investigation, outbriefing, or writing of report). A proactive rather than reactive approach should be taken by responsible officials. Officials should immediately contact those affected and offer assistance or information. Sometimes, those affected are not familiar with the internal processes being followed and do not know what actions are being taken or what information to ask for.

The DOE and LANL have a responsibility to be sensitive to the needs of those affected, create an honest and open communication with the public, and, if wrong, immediately take responsibility for actions.

I talked with Herman and he told me he was very concerned about this situation and since all the information he was receiving was second hand, he wanted to talk with Efren's wife directly. I explained about the transfer and told him she might be hard to get a hold of and gave him her name and phone numbers. I was later told that Efren's wife had messages from Herman when she returned home and a meeting was set up.

My source also informed me that the wife had been feeling other frustrations as well. She was never told that there was an investigation of the accident going on, she was never told that there was an outbriefing on the accident and she was not invited, and she was never told that there was a final report that was made public and was never offered a copy.

Even more frustrating is the fact that Efren's wife has been paying, out of her pocket, for counseling for herself and her two children because of the trauma they were still experiencing. I asked if the Employee Assistance Program at LANL would cover these expenses. She said she would confirm but that the wife had not been informed of any benefits so she was having to pay for these expenses herself. My source confirmed that the LANL Employee Assistance does cover contractors and their families.

My source also said that the wife was experiencing even more frustration because Workman's Comp was forcing her to transfer Efren to a nursing home against her wishes. The wife feels that Efren will not receive the medical care that he needs at a nursing home that he would receive at the hospital. Because of situations she and her family have experienced with nursing homes, she feels that patients put in nursing homes are pretty much just left there to die. My source did say that God works in strange ways. Just prior to the transfer of Efren from St. Joseph's to Los Alamos he developed infections in his hands from the burns and St. Joseph's said they would not transfer him anywhere until the infections were cleared up.

I told my source to have the wife lay all her frustration on the table when she met with Herman. I did hear from my source that the meeting with Herman went well.

I think we need to hear from DOE and LANL on what they intend to do so that this does not happen again.

s/Dolores M. Salazar

H. L. Daneman **1304 Calle Ramon**
Santa Fe, NM 87501 **tel: (505)983-5883 fax: (505)983-5261**

96 AUG -1 PM 2:32
RCRA

July 28, 1996

Ms. Elizabeth Withers
NEPA Compliance Officer
Office of Environment and Projects
DOE/LAAO
Los Alamos, NM 87544

Re: Safety at LANL
Your letter 2-2-1996 to Ms. Carmen Rodriguez

Madam:

As a member of the Citizens Advisory Board, I was assigned to review certain concerns of the public about safety at LANL. One of the most serious concerns is the consequence of accidents at Plutonium manufacturing facilities now being greatly expanded at LANL by means of transfer of facilities and personnel from Rocky Flats.

The basis of our concerns is twofold:

1. The production process and personnel at Rocky Flats caused enormous environmental damage to that locale. The DOE has estimates as high as $3 Billion for cleanup and the facility is now permanently closed. We must take whatever precautions are necessary to avoid this at LANL, as you will agree.

2. The safety record at LANL has been judged unacceptable, notwithstanding regular, periodic assurances from top management that needed reforms have been instituted. Accidents in Plutonium manufacturing, storage and transporting facilities carry such enormous potential consequences to public safety that even slight risk probabilities must be very carefully weighed. As a NEPA compliance officer and resident of this area, I am sure you will agree that such public concerns are fully justified.

Your letter of February 2, 1996 is official notification of a limited period during which public comments on the draft PEIS (DOE/EA-1101) can be submitted in order that the DOE can comment. Comments sent after February 16, 1996 might not be considered prior to approval of the final EA. One of our CAB members and a long-time LANL manager is exceedingly well informed on any and all regulations. He is suggesting that the CAB and it's members are no longer at liberty to comment on issues related to the environmental assessment and should, therefore, refrain from issuing recommendations such as the attached.

My concern is the legitimacy of your placing such narrow time limitations on either the public or the CAB considering that necessary information on which to base our concerns was not available to us on February 16, 1996 nor was there anywhere near adequate time to investigate other facts relevant to an informed judgment. I also doubt the DOE, in setting up the Site Specific Boards, intended that your office restrict our ability to, at any time, pursue our mission of communicating to and on behalf of the public in Northern New Mexico in matters concerning safety caused by environmental contamination from hazardous and radioactive materials.

We have been given copies of the pre-decisional Draft Environmental Assessment of January 1996. We have subsequently located the following additional relevant documents:

Draft SSM PEIS - February 1996
Supporting Documentation for Accident Impacts - March 1996
Congressional Testimony - Dr. Siegfried S. Hecker - March 1996
Type A Accident Report - April 1996
Draft Institutional Plan - May 1996
DOE Risk Assessment Workshop - June 1996

Of course, some of these documents have only been available to us in the past few weeks or, even days - not on their dates of release. Most have been acquired from sources other than the DOE/LAAO. Obviously, there has not been time for a complete study or review and consideration by the CAB or public prior to your February 16, 1996 deadline.

For the reasons stated above, the ER/WM committee of the CAB has felt obligated to submit the recommendation that the DOE suspend further expenditures on the CMR Building in Tech Area 3 as it relates to the transfer of Plutonium production from Rocky Flats until the approval of this entire project by the DOE/Washington, DC.

I would appreciate your comments on how your office provides protection of the public from the hazards inherent in this project via NEPA regulations and whether you feel the CAB or public are obliged to constrain our comments to the narrow window of opportunity given in your letter to Ms. Rodriguez in order to receive due consideration by the DOE.

Sincerely yours,

H. L. Daneman

cc: DOE, Mr. Tom Todd, CAB

Department of Energy
Los Alamos Area Office
Albuquerque Operations Office
Los Alamos, New Mexico 87544

FEB - 2 1996

Ms. Carmen Rodriguez
LANL Community Reading Room
1450 Central Ave., Ste. 101
Los Alamos, NM 87544

Dear Ms. Rodriguez:

By way of a letter dated January 22, 1996, I notified you that the U. S. Department of Energy (DOE), Los Alamos Area Office (LAAO), is considering a proposal to perform facility upgrades to the Chemistry and Metallurgy Research (CMR) Building in Technical Area 3 at the Los Alamos National Laboratory, Los Alamos, New Mexico. In addition, LAAO prepared a pre-decisional draft Environmental Assessment (DOE/EA-1101) to analyze the potential environmental consequences of this proposed action and its alternatives. A copy of the EA was placed in the LANL Community Reading Room and on the World Wide Web Computer Internet System.

The current LAAO policy is to provide a 14-day review and comment period for pre-decisional draft EAs. The 14-day review and comment period is consistent with DOE National Environmental Policy Act (NEPA) regulations. However, as a result of Stakeholder requests, LAAO has agreed to extend the review and comment period by two additional weeks for this EA; the period for the CMR EA will now close as of close of business, February 16, 1996. Comments sent to my attention at the above address within this period will be considered prior to approval of the final EA. Comments sent after this period may not allow sufficient time to be considered prior to approval of the final EA. Following the completion of the final EA, the LAAO Area Manager will issue a NEPA determination regarding the proposed project. The results of this determination will be provided to you.

If you wish to receive further information about this proposed project or the DOE NEPA process, please contact me at (505) 667-8690.

Sincerely,

Elizabeth R. Withers
NEPA compliance Officer
Office of Environment
and Projects

LAAMEP:9EW-223

Proposed CMR Building Upgrades Environmental Assessment

The U.S. Department of Energy announces the release of the Environmental Assessment proposing plans to upgrade the Chemistry and Metallurgy Research (CMR) Building at Los Alamos National Laboratory which provides a state-of-the-art research and experimental facility for analytical chemistry, plutonium and uranium chemistry, and metallurgy.

The public comment period is scheduled from January 19, 1996 and followed by a 14-day public comment period. Copies for public review are being placed at the Department of Energy's Los Alamos Community Reading Room, 1350 Central Ave., Suite 101, Los Alamos, NM 87544. The document can also be accessed through the DOE/LAAO home page on the World Wide Web at http://bayberry.lanl.gov/doe/doe_laao.html. Comments and questions can be directed to Elizabeth Withers at 528 35th Street, Los Alamos, NM 87544 (505) 667-8690 by close of business February 2, 1996. Alb. Journal 1/24/96

US DEPARTMENT OF ENERGY
LOS ALAMOS AREA OFFICE
LOS ALAMOS, NM

Comment period extended until 2/16/96 per Tony at DOE/LAAO on 1/29/96

July 26, 1996

To: Citizens Advisory Board for DOE/LANL

From: Hank Daneman and Manny Trujillo

Re: Response to "Minority Report" of 7-19-96 on CAB Recommendation #4 of 7-9-96 to:

"Defer Further Expenditures on Transfer of Plutonium Manufacture From Rocky Flats"

The presentation of a so-called "minority report" directly to the DOE by three of our members is regrettable for the following reasons:

1. It implies that the CAB does not follow correct procedures in making recommendations,

2. It alleges that supporting evidence is actually "unsubstantiated opinion", and,

3. It fails to conform to our CAB Code of Conduct.

Specifically:

A. Our concern related to the transfer of Plutonium manufacturing facilities from **Rocky Flats** because this transfer is dependent on approval of LANL as a manufacturing site and DOE headquarters has not yet agreed with this proposal. Notwithstanding, LANL management has already initiated this transfer.

A.1 The Draft Institutional Plan - 1997 - FY 2002, page 33 states, "The Laboratory completed the transfer of necessary Rocky Flats hardware and gauging equipment, . . ." even though this page refers to the preparation for limited scale production of pits as "contingent upon the SSM-PEIS Record of Decision".

A.2 Dr. Hecker's congressional testimony (3-12-96) states pit production facilities are on a a "fast track".

A.3 The FY 1997 budget logs expenses of $14.3 Million for transfer from Rocky Flats starting in 2Q96 until 3Q97.

B. It is not untimely for the CAB or its individual members to express their concern to the DOE at any time we become aware of problems which may have a serious affect on the people of the communities of Northern New Mexico. In fact, it is our duty to do so, especially since it is part of the CAB mission.

B.1 In addition, it should be noted that Congress is still debating the DOE/LANL budget.

B.2 Safety concerns are still under investigation. Note that the Office of Oversight will shortly conduct an independent "Safety Management Evaluation" at LANL, just as we recommended, to "determine how line management responsibilities for safety are effected and if they are adequate; if current staffing, including skills and numbers, are appropriate to conduct work safely; and if requirements are defined and implemented such that all operations are conducted safely and within approved limits including limiting risk".

B.3 The CAB has a continuing responsibility, irrespective of DOE public hearing dates and deadlines, to provide recommendations toward protecting safety and health of Northern New Mexico communities surrounding LANL (see our Mission Statement).

C. Our recollection disputes the allegation there was a voice vote. As a ma\ter of fact, some numbers of votes mentioned in the same allegation contradicts this suggestion.

The time to object to the rules and procedures is when the vote and decision of the CAB is being referred to the Secretary. At that time, a recount is in order. Further, our Code of Conduct does suggest that backtracking is to be discouraged.

D. Cost Effectiveness at the Sacrifice of Safety Concerns:

D.1 The PEIS provides numerous tables and discussion on the cost effectiveness of producing pits at LANL (see pages 8-1 to 8-19 of the Draft PEIS). Page 8-17 attached is typical.

D.2 Risk analysis is a series of unsubstantiated guesstimates. The one on page 31 concerning the risk of fire did not contemplate a fire such as that of June 1996. Pages 58 and 59 of the Topical Report describing accident scenarios lists 1988 technology for risk analysis - not the nationally accepted ASTM standard methods.

D.3 The aspects of human safety are mentioned on page 39 of the PEIS Table 4-4 which uses such non-quantitative terms as "not likely" referring to accident possibilities.

We are now well aware of the dismal record of LANL management in preventing serious accidents or radiological releases. This attitude of "trust me" does not conform to ASTM or other national standards for Risk Analysis.

D.4 It is further claimed (para. 3.1, page 25) that our environment will not be affected

due to Plutonium production at the transferred facility at LANL.

The NMED comment of May 6, 1996 states that radiological hazards are only covered for the old building - not for the transferred facility.

This is why we state that the PEIS fails to properly address safety concerns although cost effectiveness is amply covered. Clearly, the LANL argument presented to Congress is one stressing cost benefits and not improved safety over the failed Rocky Flats operation. It is indeed worrisome that the Rocky Flats experience of prematurely starting unapproved production processes is now underway at LANL using most of the same apparatus and even some of the same personnel.

CONCLUSION:

The reason we find the abrupt action of the three dissenting Board members to be regrettable and damaging to the CAB credibility is that it could easily have been avoided if first addressed in a constructive manner to our Chairs, the undersigned who sponsored the recommendation, or, better yet, in front of the entire Board at the time allocated for this very discussion. It is with this desire to preserve our crdibility that our Code of Conduct requests we "Be supportive of team decisions, even though a member may not totally agree."

At this point, we see no alternative but to refer this matter to the Board as a whole for appropriate action. The CAB deserves a complete and honest statement as to the motivation of the three members of the minority for bypassing our guidelines and addressing a flawed set of allegations directly to the DOE.

Hank Daneman

Hank Daneman

Manny Trujillo (s)

Manny Trujillo

Attachments: Institutional Plan FY 1997 FY 2002, Page 33.
Dr. Hecker Testimony 3-12-96, page 12.
LANL Project 93-D-123 TEC Budget page 364.
SSM PEIS page 18-7.
Environmental Assessment for the Proposed CMR Upgrades, pgs 31 and 58

Distribution: CAB Members and Ex-officio Members

that needs to be developed to beneficially influence the nuclear future.

Manufacturing and Surveillance

To support the Defense Programs mission of DOE/AL, the Laboratory continues its efforts in stockpile evaluation and pit rebuild; operations in nuclear weapons dismantlement and disassembly; operation of the special recovery line; transition to manufacturing assignments for several nonnuclear technologies; and preparations for the limited-scale manufacture of pits (contingent upon the SSM-PEIS Record of Decision).

Stockpile Evaluation

Stockpile evaluation is the basis for continued confidence in the reliability and safety of the nuclear weapons stockpile. Activities in this area will increase in importance and are expected to expand at Los Alamos as the nation moves toward a smaller and more compact weapons production complex. Stockpile evaluation is currently focused on surveillance of milliwatt radioisotope thermoelectric generators, selected gas system components, plutonium pits, and Los Alamos detonators. NWT as design agency and NMSM as production agency work closely together on surveillance, with the former defining the testing requirements and assessing the surveillance results and the latter conducting the evaluations and reporting the results. Together, they work to improve surveillance procedures and to develop enhanced surveillance tools that will allow the prediction of component lifetimes.

Nonnuclear Consolidation

With the downsizing and consolidation of the nuclear weapons production complex, certain activities that were conducted at the Pinellas, Rocky Flats, and Mound facilities have been relocated to Los Alamos. Los Alamos has assisted the activity transfer groups in planning, scheduling, and defining the development and process prove-in activities needed to ensure a smooth transfer. Los Alamos is also a receiver site for several nonnuclear technologies, including high-energy detonators, beryllium and pit support, calorimeters, and neutron-generator-tube targets. In these areas, Los Alamos is conducting research and development related to design and production, providing test components, and supporting delivery requirements as they develop. The transfer of the activity for loading neutron-tube targets will be complete in FY96, about two years ahead of schedule. In addition, the transfer of calorimeter and high-energy detonator technology is to be completed by the end of FY97, and the transfer of beryllium and pit support will be completed by the end of FY98.

Pit Surveillance and Rebuild

In pit surveillance, new scientific evaluation methods were introduced in anticipation of longer-range predictive capability interests, and the annual goal of evaluating 19 surveillance pits was met one month ahead of schedule. Additionally, surveillance and inspection records were converted to electronic storage, and a CD-ROM reporting format was established to allow active comparison of original build data on a unit against data from similar units, effectively linking surveillance and archiving for the first time.

Establishment of the pit-rebuild capability, which is the capability to build war reserve (WR) pits to replace those removed from the stockpile for surveillance purposes, is another area in which the Laboratory has made good progress. The Laboratory completed the transfer of necessary Rocky Flats hardware and gauging equipment, developed a smaller and more accurate inspection gauge, and eliminated a hazardous fluid previously used in density measurements. By switching to dry machining, the Laboratory eliminated the need for chlorinated hydrocarbons and fluorocarbon cleaning fluids; the component cleaning process was then changed so that recyclable, supercritical carbon dioxide could be used. A modern and simpler quality control program for production was also introduced.

Associated with pit rebuild, specific technology areas that must be developed or enhanced at Los Alamos include certification of the beryllium machining capability, certification of the tubulation capability, development of the capability to interface pit materials, and development and certification of joining processes. By building a WR pit for the W88 warhead in FY98, we expect to be able to demonstrate that all the necessary technologies are in place to support the task of producing WR pits for the enduring stockpile.

Detonator Manufacturing and Surveillance

With the shutdown of operations at the Mound Plant in Ohio, DOE assigned Los Alamos the responsibility for evaluating and manufacturing detonators. Late in 1995, Los Alamos demonstrated the capability for performing the evaluations. The assignment for manufacturing detonators for the future stockpile includes the design and fabrication of detonator simulators used in flight-test units for stockpile evaluation. The simulators have WR-quality standards, and Los Alamos has now demonstrated the ability to

their knowledge of tritium hardware and processes and transferred the production capability to the Laboratory with significant improvements. The result is a system that is providing deuterated targets and will provide tritiated targets to Sandia National Laboratories for incorporation into neutron generators on schedule within months instead of years. The improved process also reduced radioactive waste generated by 90 percent.

Plutonium Pit Manufacturing

The preferred SSM-PEIS alternative for pit manufacturing calls for a limited-scale production of pits at the Los Alamos TA-55 plutonium facility, the only facility in the nation currently able to tackle such an assignment. We are aggressively supporting this decision because we believe that pit manufacturing at the level of approximately 50 pits per year would greatly complement our current R&D and surveillance missions, while concurrently saving the taxpayers a lot of money.

We are developing a plan that would put in place the capacity to build 50 complete pits per year on a single-shift basis. The interior equipment and utilities in one wing of the plutonium facility will be rearranged so that we have an integrated production and R&D area. To meet the projected build requirements of the military, we are placing the plutonium facility project on a fast-track internal validation and review for submission as a new construction start in the FY 1998 budget.

We will be in very limited pit production for the W88 warhead for the Trident II pit rebuild program (rebuilding units destroyed in surveillance) during FY-1998. Getting started as soon as possible is important to meet the Navy's requirements and to capture the pit production knowledge base before it is lost. No war reserve pits have been manufactured in the United States since Rocky Flats shut down its plutonium operations in June, 1989. By employing the integrated R&D, surveillance end remanufacturing paradigm, we expect to improve the existing fabrication processes, minimize waste generation, and reduce worker radiation exposure. In addition, the hands-on manufacturing operations will help to maintain rigorous nuclear weapons safety practices among our scientists, engineers and technicians.

We are also teaming with colleagues at Lawrence Livermore, Savannah River, and Pantex to develop contingencies for larger-scale pit-production requirements. We expect to learn much from the W88 pit rebuild program and the 50-pit manufacturing module at TA-55 that would allow the team to design a modular, large-scale production capability that could be deployed rapidly should requirements change. I should add that such teaming is also occurring with Savannah River, Pantex, Allied-Signal Kansas City, and the Y-12 plant to address other nuclear weapons component production capabilities. In all cases, we will use the integrated R&D, surveillance, and remanufacturing paradigm.

TESTIMONY OF SIEGFRIED S. HECKER,

DIRECTOR

LOS ALAMOS NATIONAL LABORATORY

HEARING

of the

SUBCOMMITTEE

on

MILITARY PROCUREMENT

COMMITTEE ON NATIONAL SECURITY

UNITED STATES HOUSE OF REPRESENTATIVES

March 12, 1996

8. Project Description, Justification, and Scope (continued)

Existing space at TA-16 will be utilized to receive the transfer of the technology from Mound.

Subproject 23: ICF Target Loading: TEC - $1,200,000

TEC	Previous	FY 1995	FY 1996	FY 1997	Outyear	Construction Start - Completion Dates
$ 1,200	$ 0	$ 300	$ 500	$ 400	$ 0	3rd Qtr. FY 1995 - 4th Qtr. FY 1997

LOS ALAMOS NATIONAL LABORATORY - PRODUCTS TRANSFERRED FROM PINELLAS PLANT: TEC - $12,799,000

Subproject 24: Neutron Tube Target Loading: TEC - $12,799,000

TEC	Previous	FY 1995	FY 1996	FY 1997	Outyear	Construction Start - Completion Dates
$ 12,799	$ 2,713	$ 5,239	$ 2,847	$ 2,000	$ 0	2nd Qtr. FY 1994 - 1st Qtr. FY 1997

TEC increased from $4,115,000 to $12,799,000. Initial plans called for relocation and reestablishment of this activity at TA-21. Since that time, DOE has directed that all tritium related work be phased out of TA-21 due to operational and safety concerns. Subsequently, an interim plan, proposed consolidation of the NTTL activities in the Weapon Engineering Tritium Facility (WETF) at TA-16, which also supports tritium operations. This plan has now been fully documented and will require additional ES&H upgrades to existing TA-16 facilities. The TEC increase incorporates the change in location and required upgrades to assure appropriate ES&H safeguards.

Building 209 at TA-21 will be used as the location of the interim facility for the Neutron Tube Target Loading technology program at the LANL. Existing space at TA-16 will be utilized as the permanent location for the NTTL technology. The interim facility is required to move the technology prior to the cessation of donor site activities. The consolidation activities include Tritium Target Loading and Target Loading Verification. The loading of neutron tube targets will be accomplished by installing a glovebox line in Building 209. A small portion of an existing concrete frame structure will be modified to accept this glovebox line. The glovebox line will house a target loader, vacuum pump for the loader, and will have ancillary equipment consisting of a mass spectrometer, calorimeter, film dissolution station, thermal desorption with fume hood, and related piping, power, instrumentation, controls, etc.

FY 1997 funds will be used to complete construction and installation.

LOS ALAMOS NATIONAL LABORATORY - PRODUCTS TRANSFERRED FROM ROCKY FLATS PLANT: TEC - $14,270,000

Subproject 25: Pit Support Function: TEC - $2,145,000

TEC	Previous	FY 1995	FY 1996	FY 1997	Outyear	Construction Start - Completion Dates
$ 2,145	$ 995	$ 1,150	$ 0	$ 0	$ 0	2nd Qtr. FY 1996 - 3rd Qtr. FY 1997

TEC decreased from $4,233,000 to $2,145,000. TEC decrease due to a reassessment of donor and receiver site capital equipment transfer costs and requirements.

Building 66 at the TA-3/SIGMA site will be upgraded to accommodate the consolidation of the Pit Support technology maintenance program to be transferred from RF to LANL. Relocation of some equipment and pertinent records to continue to support the Pit Support mission is required.

A-3

Capability of Production Infrastructure to Support Scheduled Work - also represents a measurement of technical risk for the site alternative, as reflected in maturity of the production support infrastructure. Infrastructure elements that currently support production activities, such as numerical control machining, product engineering, precision tooling and gaging, NDT/NDE, precision assembly and joining score high.

Minimize Cost - measures the overall cost of an alternative to provide the specified product. Low investment and steady-state operating cost score high. The cost ranking algorithm to develop the ranking is:

Rank value = (Lowest Site NPV Cost / Site NPV Cost) x 100.

Ranking of Pit Manufacturing/Plutonium Reuse Alternatives

Ranking Criteria	Score	
	LANL	SRS
Basic Production Capability	90	70
Capability of Production Infrastructure	92	50
Minimize Cost	100	86

Ranking of Intact Pit Reuse, Recertification, and Requalification Alternatives

Ranking Criteria	Score	
	Pantex	NTS
Basic Production Capability	85	50
Capability of Production Infrastructure	100	50
Minimize Cost	100	51

10. Analysis of Ranking

10.1 Pit Manufacturing/Plutonium Reuse

Basic Production Capability to Support Scheduled Work: This criterion addresses technical risk with respect to the present situation at the site. The LANL currently has technology elements applicable to plutonium fabrication in operation or in use in development programs, and was scored high on this criterion. The SRS has never manufactured pits and although the site assumed a process flow sheet which employs proven technology, lack of experience in the exercise of that technology poses a technical risk with respect to timely startup if SRS were selected. The SRS was assigned a lower score on this basis.

Capability of Production Infrastructure to Support Scheduled Work: This criterion addresses risk associated with past and present demonstration of competency in production management. Both sites have demonstrated production management skill. In the case of SRS, scheduling of fuel fabrication, reactor charging and discharging,

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review of the LLNL data report (LLNL 1995), Accident Scenario Notes (Notes 1992), Department of Energy Defense Program Survey Report (DOE, 1993) and the Y-12 Environmental Assessment (DOE, 1994) this scenario is evaluated. The postulated criticality is based on the characteristics of a solution criticality which is an initial burst of 10^{18} fissions and a total yield of 10^{19} fissions during 8 hour period as liquid is boiled from a solution. This is an extremely unlikely accident event, which has an estimated probability in the range of $1x10^{-6}$ to $1x10^{-4}$ per year. This accident, with the same probability range of $1x10^{-6}$ to $1x10^{-4}$ per year (average probability of $1x10^{-5}$ per year), was evaluated at ORR, LANL, and LLNL. The source terms are based on 10^{19} fissions and are presented in appendix F (Facility Accidents), of Stockpile Stewardship and Management PEIS.

2.3.1.2 Scenario 2: Fire-induced Dispersion of Highly Enriched Uranium From a Building Collapse and Resultant Fire

The postulated accident assumes that a beyond design basis earthquake causes collapse of the uranium process, component fabrication, and storage facilities. Fires result in the process and component fabrication facilities due to ruptured gas lines and/or hydraulic lines.

ORR. The probability of this accident is beyond evaluation basis ($1x10^{-7}$ to $1x10^{-6}$ per year). The total HEU source term released in oxide form is estimated to be 17 kg. The source term breakdown by building is as follows. For Building 9204-4, the immediate and resuspension source term is approximately 0.8 kg of HEU. For Building 9206, the total immediate and resuspension release from the facility is 8.6 kg of HEU. For Building 9212, the total immediate and resuspension source term is 7.2 kg of HEU. For Building 9215 the total immediate and resuspension source term is 0.4 kg of HEU and 1.5 kg of depleted uranium.

LANL. The accident at ORR is assumed to be applicable at LANL.* The probability is assumed to be in the range of $1x10^{-7}$ to $1x10^{-6}$ per year. The total release is 17 kg of HEU and 1.5 kg of depleted uranium. The location of the release is the CMR Building.

LLNL. The accident at ORR is assumed to be applicable at LLNL. The probability is assumed to be in the range of $1x10^{-7}$ to $1x10^{-6}$ per year The total release is 17 kg of HEU and 1.5 kg of depleted uranium.

The collapse of five key uranium buildings (Building 9204-4, 9206, 9212, 9215 and 9720-5) at ORR was analyzed (DOE, 1994) using data from the *Defense Program Safety Survey* (DOE, 1993). This accident is considered so unlikely that it is not reasonably foreseeable, and therefore has a probability of less than $1x10^{-6}$ per year. The postulated accident based on this information assumes that a beyond evaluation basis earthquake causes the buildings to collapse simultaneously releasing 17 kg of HEU and 1.5 kg of depleted uranium. The probability is assumed to be in range of $1x10^{-7}$ to $1x10^{-6}$ per year. This accident event at ORR is assumed to be applicable for evaluation at both LLNL and LANL.

* (prepared before the forest fire of June 1996).

1. INTRODUCTION

This report documents the input data from and results of the analysis of impacts from accidents considered in the *Draft Programmatic Environmental Impact Statement* (PEIS) *for Stockpile Stewardship and Management* (DOE, 1996a). The Stockpile Stewardship and Management PEIS analyzed the consequences to the environment that would be expected to occur if changes to the Nuclear Weapons Complex were implemented to support the Department of Energy's (DOE's) Stockpile Stewardship and Management Program. The Stockpile Stewardship and Management PEIS considered eight separate missions. The eight missions considered were:

- Weapons assembly/disassembly (A/D)
- High explosives (HE) fabrication
- Pit fabrication
- Intrusive and nonintrusive modification pit reuse
- Storage of plutonium strategic reserves
- Storage of highly enriched uranium (HEU) strategic reserves
- Secondary and case manufacturing
- Nonnuclear fabrication

Eight separate sites were also considered as part of the Stockpile Stewardship and Management PEIS:

- Pantex Plant, Amarillo, TX
- Y-12 Plant at Oak Ridge Reservation, Oak Ridge, TN
- Savannah River Site, Aiken, SC
- Los Alamos National Laboratory, Los Alamos, NM
- Lawrence Livermore National Laboratory, Livermore, NM
- Sandia National Laboratories, Albuquerque, NM
- Nevada Test Site, NV
- Kansas City Plant, Kansas City, MO

Table 1-1 presents the combinations of sites and missions for which accident impacts were analyzed.

Section 2 presents the development of the accident scenarios for the missions alternatives. Section 3 presents the site related data used in the accident analyses. This data include population distributions, distances from accident locations to the maximally exposed individual, and meteorological data. Section 4 describes the application of the accident scenarios. Section 5 lists the references used in this report.

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alternatives do no necessarily have approved safety analysis reports for the proposed stockpile stewardship and management mission at this time and therefore the terms EBA and BEBA are used instead.

4.3 Complimentary Cumulative Distribution Functions

A graphical presentation of accident consequences (technically referred to as Complimentary Cumulative Distribution Functions (CCDFs), measured in terms of the number of cancer fatalities in the population residing out to a distance of 80 km (50 mi) from the point of the accident, is given for each alternative in chapter 4 of the Stockpile Stewardship and Management PEIS. Whereas the accident impacts listed in chapter 4 of the Stockpile Stewardship and Management PEIS are single point values, in reality any value over a specified range has a probability of occurring. (This is technically referred to as the distribution of probable values on either side of the single point value.) In the CCDF, the range of probable values, or the range of probable consequences is shown on the horizontal axis. For most alternatives, the range of consequences is from essentially zero cancer fatalities to as many as a hundred or a thousand or even more depending on the alternative, the size of the offsite population, meteorology, and other factors. As the number of cancer fatalities increases, the probability of occurrence decreases as measured on the vertical axis. One way of reading the information in the CCDF is for the reader to choose a value for the number of cancer fatalities on the horizontal axis; follow a vertical direction to the curve; and follow a horizontal direction to a value on the vertical axis. The value on the vertical axis represents the probability that the number of cancer fatalities would exceed the value chosen on the horizontal accident. That probability value reflects both the probability of the accident and the variability of potential outcomes of an accident implicit in certain modeling parameters such as meteorology.

5. REFERENCES

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