

**CMRR Public Meeting, September 19, 2006**

**Volume 2**

**Los Alamos National Laboratory  
Los Alamos, New Mexico**



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# *I. Agenda*

# Agenda

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**CMRR Public Meeting**  
***Tuesday, September 19<sup>th</sup>, 2006***  
**Fuller Lodge**  
**6:30 – 8:30**

6:30 – 6:45	Welcome Ground rules Briefing on Public Comment Provisions Background and Purpose Introductions	Ed Moreno
6:45 – 7:00	Project Overview	Steve Fong Tim Nelson
7:00 – 7:10	Environment, Safety & Health Update	Steve Fong
7:10 – 7:20	Overview of Air Permit Application	Bill Blankenship
7:20 – 7:30	Seismic Investigation Update	Mike Salmon
7:30 – 8:15	Question, Answer and Public Comment	Ed Moreno
8:15 – 8:25	Requests for topics for next meeting	Ed Moreno
8:30	Adjourn	Steve Fong

## ***II. Handouts and Posters***

## CMRR and Nuclear Facility Consolidation

As part of the Department of Energy's nuclear facility consolidation, LANL and NNSA are consolidating LANL's nuclear operations into fewer facilities and security areas. In April 2000, LANL had 1.8 million sq ft of nuclear facility space. Nuclear facility consolidation will reduce LANL's nuclear facility gross square footage by more than half the April 2000 footprint.

As part of nuclear facility consolidation, the CMRR Project will upgrade existing CMR facilities, reduce operating and security costs, improve recruitment by providing state-of-the-art infrastructure and workspace, and ensure compliance with current environmental, safety, and health requirements.

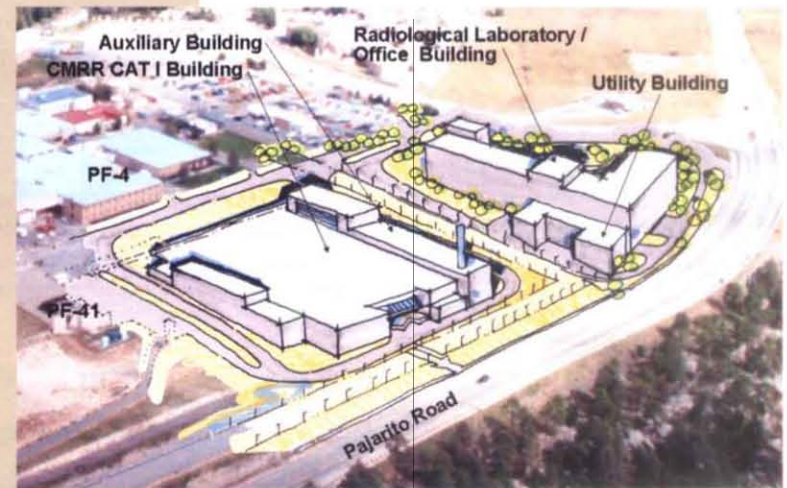
### More Information

Dr. Timothy O. Nelson  
CMRR Project Director  
Phone: 505-667-2326  
Email: ton@lanl.gov

CMRR/MS G751  
Los Alamos  
National Laboratory  
Los Alamos, NM 87545

# Chemistry and Metallurgy Research Replacement (CMRR)

Los Alamos National Laboratory





# CMRR Project

## CMRR Project: An Overview

The Chemistry and Metallurgy Research Replacement (CMRR) Project primarily supports Defense Program activities at Los Alamos National Laboratory (LANL). Costing \$745M to \$975M over 8 to 12 years, construction is planned in three phases:

- A Radiological Laboratory Utility Office Building (RLUOB)
- B Special facilities equipment, including long-lead equipment and instrumentation
- C Nuclear Laboratory Facility

The CMRR Project will provide the capabilities the National Nuclear Security Administration (NNSA) and LANL need to continue the nuclear mission to maintain and certify the US nuclear stockpile through work in the following areas:

- Pit manufacturing, surveillance, and disassembly
- Enhanced surveillance
- Milliwatt radioisotope thermoelectric generator surveillance
- Retired stockpile component processing
- Aboveground subcritical experiments
- Special nuclear material readiness and materials storage
- Advanced design/production technologies
- Dynamic materials properties
- Material certification in a hostile environment
- Arms control and nonproliferation
- Advanced nuclear fuels

These analytical chemistry, materials characterization, and actinide research and development capabilities, currently housed in the 550,000 sq ft CMR building, will move to the new CMRR facilities as they are completed.

### Phase A:

Radiological Laboratory  
Utility Office Building  
(RLUOB)

### Phase B:

Special facilities equipment,  
including long-lead  
equipment and  
instrumentation

### Phase C:

Nuclear Laboratory Facility

## Phase A: Radiological Laboratory Utility Office Building

The RLUOB will house radiological laboratory space; a training center, 4 classrooms, and 2 nonradiological training simulation labs; a utility building that supports all CMRR Project facilities; and office space to support 350 personnel in segregated (cleared and uncleared) areas.

An Entrance Control Facility will connect a tunnel from the RLUOB to the Nuclear Laboratory Facility.

The RLUOB also will have a Facility Incident Command Center, an operations center, and space for future support of the existing Technical Area 55 Plutonium Facility, PF-4.



A design-build contract, a procurement method already successfully demonstrated at LANL, was issued to Austin Commercial Contractors, LP, of Dallas, TX, in November 2005.

The proposed RLUOB total project cost performance baseline is \$164M (contract life is 1095 calendar days). Approximately 300

construction workers will be employed during the RLUOB contract.

## Phases B and C

Preliminary design work is under way on Phases B and C. Construction work for Phase C is scheduled to begin in 2008 and is expected to be complete by 2013.

# CMRR Project Public Meeting Information Sheet

September 19, 2006

Page 1 of 2

## Frequently Asked Questions (FAQs)

Q: Can public parties make presentations?

A: Yes, in regard to CMRR. Invitations to add to the agenda are sent out to settlement parties prior to planning.

Q: Is the nuclear facility above or below grade?

A: The facility is mostly below grade.

Q: Where exactly are the buildings going to be located?

A: Northeast of the intersection of Pajarito Road and Pecos Drive. Pajarito Road is an access controlled route.



Q: Who is the contractor?

A: Austin Commercial is the contractor for the radiological facility. The nuclear facility has not yet gone out for bid.

Q: What other construction projects have we reviewed for lessons learned?

A: We've reviewed designs and operations of the Non-Proliferation International Security Center (LANL), Strategic Computing Center (LANL), Highly Enriched Uranium Manufacturing Facility (Y-12), Tritium Extraction Facility (SRS), MOX Fuel Fabrication Facility (SRS), Pit Disassembly and Conversion Facility (SRS), National Ignition Facility (LLNL), Waste Treatment Plant (HS).

Q: What is the estimated cost of the building?

A: The initial, approved cost is \$745-\$975 Million. The next estimate will be performed at the end of the preliminary design phase.

Q: How frequently are public meetings held?

A: CMRR Project Public Meetings are held every six months until completion of the project, per a settlement agreement between the Department of Energy, the New Mexico Environment Department, the University of California and seven local citizens groups. These groups include: Concerned Citizens for Nuclear Safety, Nuclear Watch of New Mexico, Peace Action New Mexico, Loretto Community, TEWA Women United, Embudo Valley Environmental Monitoring Group, New Mexico Environmental Las Center.

Q: What is the relationship between the CMRR Project and the current SWEIS?

A: The 1999 SWEIS (Site Wide Environmental Impact Statement) for LANL permits implementation of the CMRR Project as it is currently planned and scoped. The 2004 CMRR EIS also permits implementation of the project as currently planned and scoped.



# CMRR Project Public Meeting Information Sheet (continued)

September 19, 2006

Page 2 of 2

Q: What is the relationship between the CMRR Project and the draft SWEIS?

A: The current scope of the CMRR Project is bounded within the parameters of the new, draft SWEIS as proposed. The 2004 CMRR EIS (DOE/EIS-0350) evaluated the environmental impacts of constructing and operating a facility that would support expanded plutonium operations at LANL consistent with those described in the new draft SWEIS. At this time, no new or additional NEPA analysis should be required to allow the CMRR Project to support the Expanded Operations Alternative described in the new draft SWEIS.

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## Acronyms

AC — Analytical Chemistry	MC — Materials Characterization
ASCE — American Society of Civil Engineers	MNS — Mission Needs Statement
CD — Conceptual Design, Compact Disk	NEPA — National Environmental Policy Act
CDR — Conceptual Design Report	NF — Nuclear Facility
CMR — Chemistry & Metallurgy Research Building	NMAC — New Mexico Administrative Code
CMRR — Chemistry & Metallurgy Research Facility Replacement Project	NMED — New Mexico Environment Department
DOE — Department of Energy	NNSA — National Nuclear Security Administration
DOT — Department of Transportation	NSR — New Source Review
DNFSB — Defense Nuclear Facility Safety Board	PDSA — Preliminary DSA
DSA — Documented Safety Analysis	PSHA — Probabilistic Seismic Hazards Assessment
EIS — Environmental Impact Statement	Pu — Plutonium
EPA — Environmental Protection Agency	R&D — Research and Development
ES&H — Environment, Safety & Health	ROD — Record of Decision
F&OR — Functional and Operational Requirement	RLUOB — Radiological Laboratory, Utility & Office Building
HEPA — High Efficiency Particulate Air filter	SFE — Special Facilities Equipment
HS — Hanford Site	SRS — Savannah River Site
ISM — Integrated Safety Management	SSC — Safety structures, systems and components
LANL — Los Alamos National Laboratory	SWEIS — Site Wide Environmental Impact Statement
LANS — Los Alamos National Security, LLC	TA-55 — Technical Area 55
LASO — Los Alamos Site Office	U — Uranium
LEED — Leadership in Energy and Environmental Design	US — United States
LLNL — Lawrence Livermore National Laboratory	Y-12 — Y-12 National Security Complex

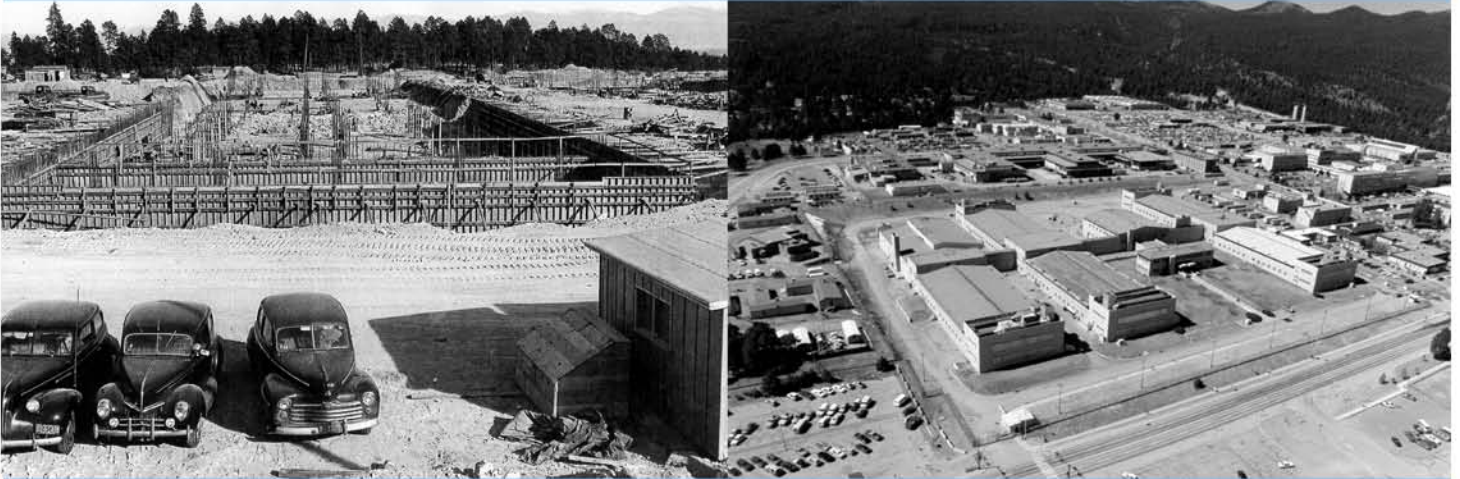


LA-UR-06-6591



# CHEMISTRY AND METALLURGY RESEARCH REPLACEMENT (CMRR) PROJECT

## Historical Photos of Chemistry and Metallurgy Research (CMR) Facility



### CMRR Project Phases

CMRR PROJECT

Radiological Lab Utility Office Building (RLUOB)

PHASE A

Special Facility Equipment (SFE)

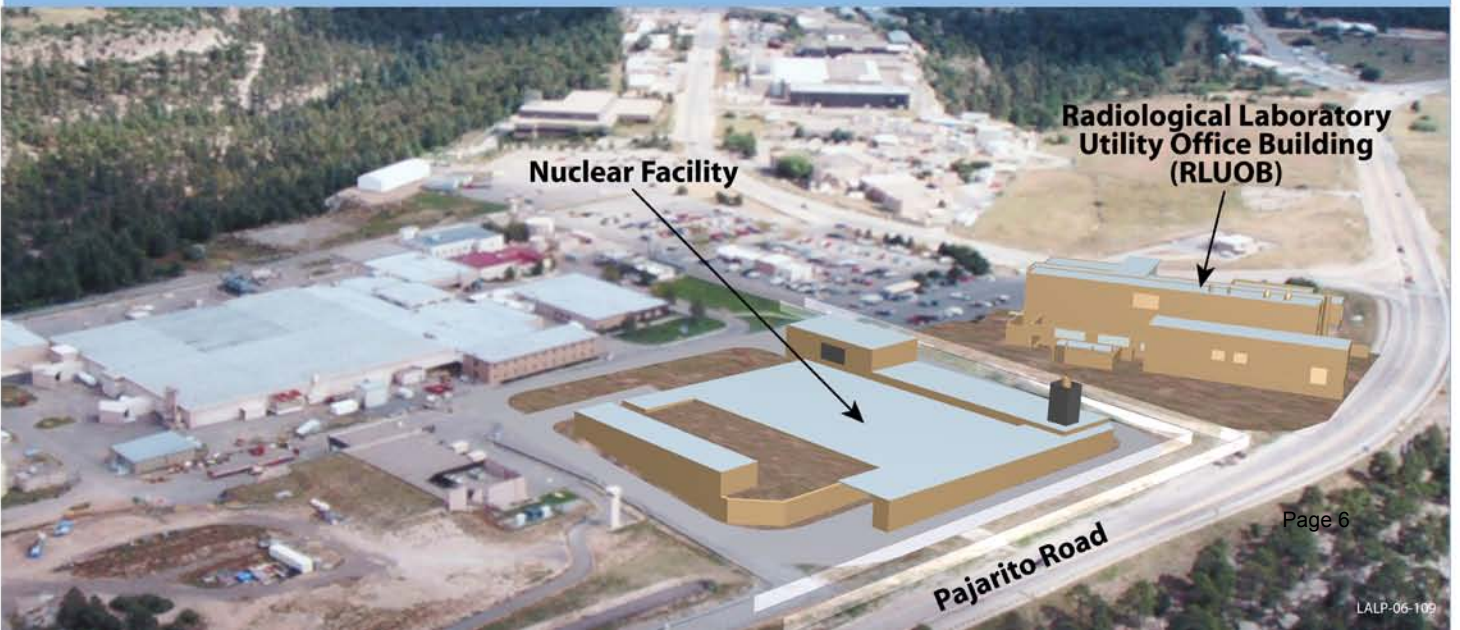
PHASE B

Nuclear Facility (NF)

PHASE C



### Architectural Drawing of CMRR Project





**ENTRY VIEW**



**SOUTH VIEW**



**NORTH ELEVATION**



**SOUTH ELEVATION**



**EAST ELEVATION**



**WEST ELEVATION**



**NORTH LOBBY**



**SOUTH LOBBY**



**CMRR – PHASE A  
RADIOLOGICAL LABORATORY UTILITY OFFICE BUILDING  
(RLUOB)**

**SETTLEMENT AGREEMENT  
AMONG  
THE NEW MEXICO ENVIRONMENT DEPARTMENT,  
THE UNITED STATES DEPARTMENT OF ENERGY,  
THE UNIVERSITY OF CALIFORNIA,  
CONCERNED CITIZENS FOR NUCLEAR SAFETY,  
NUCLEAR WATCH OF NEW MEXICO,  
PEACE ACTION NEW MEXICO,  
LORETTO COMMUNITY, TEWA WOMEN UNITED,  
EMBUDO VALLEY ENVIRONMENTAL MONITORING GROUP,  
AND  
NEW MEXICO ENVIRONMENTAL LAW CENTER**

This Settlement Agreement (“Agreement”) is entered by and among the New Mexico Environment Department (“NMED”); the United States Department of Energy (“DOE”) and the University of California (“University”) (collectively referred to as “Applicants”); and Concerned Citizens for Nuclear Safety, Nuclear Watch of New Mexico, Loretto Community, Peace Action New Mexico, Tewa Women United, Embudo Valley Environmental Monitoring Group, and New Mexico Environmental Law Center (collectively referred to as “Interested Parties”), for the purpose of resolving specific disputes concerning the proposed Air Quality Permit No. 2195-N, issued by the New Mexico Environment Department Air Quality Bureau for the Chemistry and Metallurgy Research Replacement Building (“CMRR”) Project at Los Alamos National Laboratory (“LANL”).

**DECLARATIONS**

**Whereas**, the Applicants applied for a New Source Review (NSR) Air Quality Permit pursuant to 20.2.72.200 NMAC on March 1, 2005 for the construction of the CMRR Project;

**Whereas**, after application review and requests for additional information, NMED issued draft NSR Air Quality Permit No. 2195-N to the Applicants on June 10, 2005;

**Whereas**, pursuant to 20.2.72.206 NMAC, NMED issued a public notice and notified the Interested Parties that the pending application and draft permit were available for review and comment by the general public;

**Whereas**, the Interested Parties and the Applicants provided written comments and stated specific objections to NMED pertaining to the draft NSR Air Quality Permit No. 2195-N and NMED proposed to hold a hearing on the draft permit;

**Whereas**, the Parties to this Agreement have met to discuss the draft NSR Air Quality Permit No. 2195-N and objections to the draft permit, and negotiated resolution of those objections in good faith;

**Now therefore**, in consideration of the foregoing declarations and the following terms, conditions, and covenants to be kept, honored, and performed by NMED, the Applicants, and the Interested Parties, each of them agrees as follows:

## **I. AUTHORITY AND SETTLEMENT TERMS**

### **A. AUTHORITY**

1. **The Parties.** NMED is an executive agency of the State of New Mexico (“State”). DOE is an executive agency of the United States. The University is a contractor of DOE and operator of LANL. The Interested Parties are citizen groups and non-profit organizations with the authority to enter into legally binding agreements.

2. **The Facility.** The proposed CMRR Project is planned to be constructed at Technical Area 55 within LANL boundaries and on DOE land. The proposed CMRR Project will replace the existing Chemistry and Metallurgy Research Building at LANL. Pursuant to 20.2.72.200 NMAC, the Applicants are required to obtain an NSR air quality permit from NMED prior to commencement of construction of the CMRR Project.

### **B. SETTLEMENT TERMS**

3. **Permit Application Revision.** The Applicants shall submit a letter within one business day of the effective date of this Agreement to NMED, with copies to the Interested Parties, revising the application submitted on March 1, 2005, limiting the application to only Phase A and B of the CMRR Project. Phase A and B of the CMRR Project include construction of the Radiological Laboratory and Office Building, and a Utility Building (referred to as the RLUOB). The Applicants will affirm in the letter that the March 1, 2005 application will not apply to Phase C of the CMRR Project and that they will request a revision of the construction permit from NMED prior to initiating construction of Phase C. Phase C includes construction of the Security Category I, Hazard Category 2 nuclear facility. Revision of the permit to include construction of Phase C shall be subject to the requirements of 20.2.72.200 NMAC. If for any reason the Applicants are unable to construct Phase C of the CMRR Project, the Applicants shall not incorporate any functions of Phase C that require an air quality permit into the CMRR Project for Phases A and B, without first obtaining an air quality permit for such functions.

4. **Public Comment on DOE Request for Approval from EPA under 40 CFR Part 61, Subpart H.** The Applicants shall publish a public notice and mail notification to the Interested Parties about the availability for review of the Applicant’s request to the U.S. Environmental Protection Agency (“EPA”) for pre-construction approval of Phase C under 40 CFR Part 61, Subpart H. The Applicants shall hold a public meeting and provide an opportunity for dialogue among the Applicants, the Interested Parties, and other members of the public, including local governments. The Applicants shall provide at least thirty (30) days for public comment and shall



respond in writing to any written comment they receive regarding the pre-construction approval request they make under 40 CFR Part 61, Subpart H to EPA. The Applicants shall submit the written public comments and the written responses to EPA with their pre-construction approval request.

**5. CMRR Project Public Meetings.** The Applicants shall publish a public notice and mail notification to the Interested Parties about public meetings to be held at least once every six (6) months to discuss the CMRR Project until physical construction of Phases A, B, and C of this Project is completed; or, if a phase is cancelled, until the completion of the physical construction and turnover to DOE of the approved and funded phases; or until otherwise agreed by the Parties. The Applicants shall provide an opportunity for both written and oral public comment at the public meetings. The CMRR Project meetings shall be single subject meetings in addition to, and will not be combined with, other public meetings the Applicants may hold, including but not limited to, the Sitewide Environmental Impact Statement for LANL (SWEIS). It is understood by all Parties that security and procurement sensitive information cannot be briefed at public meetings.

**6. Annual TAP and VOC Summary Report.** Within one business day of the effective date of this Agreement, the Applicants shall submit a written request to NMED, with copies to the Interested Parties, that NMED include a provision in the permit that the Applicants shall submit to NMED an annual report summarizing emissions of toxic air pollutants (TAPs) and volatile organic compounds (VOCs) found in 20.2.72.500 NMAC, Tables 1, 2, A and B from the CMRR Project Phases A and B.

**7. Public Hearings on Permit No. 2195-N.** The Applicants and the Interested Parties agree that no public hearing is necessary regarding NSR Air Quality Permit No. 2195-N and further agree not to request a public hearing regarding NSR Air Quality Permit No. 2195-N for Phases A and B of the CMRR Project under 20.2.72.206 (B) (2) NMAC, or any other provision of the New Mexico Environmental Improvement Act or Air Quality Control Act or regulations. The Applicants, and the Interested Parties also agree not to appeal the final NSR Air Quality Permit for Phases A and B under 20.2.72.207 NMAC to the Environmental Improvement Board or to the New Mexico Court of Appeals. This Agreement does not preclude the Applicants or the Interested Parties from requesting a public hearing concerning or appealing revisions to the NSR Air Quality Permit authorizing Phase C of the CMRR Project.

**8. Costs.** NMED, the Applicants, and the Interested Parties each shall be responsible for its own costs of performance under this Agreement, except as otherwise provided in the Agreement.

## **II. JURISDICTION AND REMEDIES**

### **A. JURISDICTION**

**9. Jurisdiction.** The parties agree that the laws of the State of New Mexico shall govern any disputes arising under this Agreement and disputes arising under this agreement will be filed in a court of appropriate jurisdiction.

10. **Enforcement.** Should any Party determine that there has been a violation or deficiency in the actions of the other Parties under this Agreement including attachments to this Agreement, that Party will notify the other parties in writing of the violation or deficiency and propose a plan to correct the violation or deficiency. If the other Party fails to respond or fails to cooperate in correcting the violation or deficiency within twenty (20) days of receipt of the complaint, the complaining Party may seek enforcement of this Agreement in court.

11. **Enforcement of Certain Provisions of Agreement.** The Parties agree that enforcement of the public comment on the Applicants' request for approval from EPA under 40 CFR Part 61, Subpart H (paragraph 4 of this Agreement) and the CMRR Project Public Meetings (paragraph 5 of this Agreement) are not part of NMED's air quality permitting process for the proposed CMRR Project. The Parties agree that no Party shall hold NMED liable for enforcement of and the Parties agree to release NMED from all liability associated with the provisions found in paragraphs 4 and 5 of this in the Agreement.

## **B. REMEDIES**

12. **Remedies.** Subject the terms of this Agreement, any Party to this Agreement may seek any equitable or other legal relief available under applicable laws, including attorney's fees and costs that a court awards to a prevailing Party in a legal proceeding that arises under the terms of this Agreement. NMED reserves the right to pursue any relief authorized by applicable statutes and regulations and reserves the right to enforce the permit and this Agreement by administrative or judicial action, which decision shall be in its sole discretion. NMED agrees that it shall not enforce paragraphs 4 and 5 of the Agreement administratively.

## **III. OTHER TERMS AND CONDITIONS**

13. **Legal effect.** Unless otherwise stated in this Agreement, nothing in this Agreement will be construed to restrict any parties' authority to fulfill their responsibilities or assert rights under any federal or state statute or regulation. This Agreement shall be binding on the parties and their officers, directors, employees, agents, subsidiaries, successors, assigns, trustees, or receivers.

14. **Effective date.** This Agreement shall become effective upon execution by NMED, the Applicants and all of the Interested Parties.

15. **Authority of Signatories.** Each undersigned representative of a Party to this Agreement certifies that he or she is fully authorized to enter into the terms and conditions of the Agreement and to execute and legally bind such Party to this document.

16. **Duration.** This Agreement shall continue in effect until construction of Phase C of the CMRR Building is completed; or if Phase C is cancelled, until the completion of physical construction and turnover to DOE of the approved and funded phases; and shall then terminate. The Applicants will provide notice to NMED and the Interested Parties by certified mail of such termination.

17. **Amendment.** This Agreement may not be amended, modified, or altered except by written agreement executed by all Parties to the Agreement.

18. **Force Majeure.** Force majeure shall not apply to this settlement agreement.

19. **Notice.** Notices provided pursuant to this Agreement shall be deemed to have been given when delivered by electronic mail, facsimile, or deposited in the United States mail, postage prepaid, at the addresses listed below, unless the Party in question notifies the other Parties of a different address in writing.

U. S. Department of Energy  
CMRR Federal Project Director  
Los Alamos Site Office  
528 35th Street  
Los Alamos, NM 87544  
Phone: 505-665-5534  
Fax: 505-667-1039  
Email: sfong@doeal.gov

Loretto Community  
113 Camino Santiago  
Santa Fe, NM 87501  
Phone: 505-983-1251  
Fax: no fax  
Email: pmsl@cnspl.com

New Mexico Environment Department  
Air Quality Bureau  
2048 Galisteo  
Santa Fe, NM 87505  
Phone: 505-827-1494  
Fax: 505- 827-1523  
Email: Richard.Goodyear@state.nm.us

NM Environmental Law Center  
1405 Luisa Street, Suite 5  
Santa Fe, NM 87505  
Phone: 505-989-9022  
Fax: 505-989-3769  
Email: dmeiklejohn@nmelc.org

CCNS  
107 Cienega St.  
Santa Fe, NM 87501  
Phone: 505-986-1973  
Fax: 505-986-0997  
Email: ccns@nuclearactive.org

Peace Action New Mexico  
226 Fiesta Street  
Santa Fe, NM 87501  
Phone: (505) 989-4812  
Fax: 505-989-4812  
Email: peaceactionnm@aol.com

Nuclear Watch of New Mexico  
551 W. Cordova Road, #808  
Santa Fe, New Mexico 87505  
Phone: (505) 989-7342  
Fax: (505) 989-7352  
Email: jcoghlan@nukewatch.org

Tewa Women United  
RR5, Box 442T  
Santa Fe, NM 87506  
Phone: (505) 747-3259  
Fax: (505) 747-4067  
Email: tewawum@msn.com

Embudo Valley Environmental Monitoring Group  
P.O. Box 291  
Dixon, NM 87527  
Phone: 505-579-4076  
Fax: no fax

Email: [serit@cybermesa.com](mailto:serit@cybermesa.com)

University of California  
Los Alamos National Laboratory  
Group Leader, Meteorology and Air Quality Group  
Post Office Box 1663, MS J978  
Los Alamos, NM 87545  
Phone: (505) 665-8855  
Fax: (505) 665-8858  
Email: [davef@lanl.gov](mailto:davef@lanl.gov)

20. **Delay or Omission.** No delay or omission in the exercise of any right or duty under this Agreement shall impair such right or duty nor shall it be construed as a waiver of or acquiescence to a breach or default of this Agreement. No Party shall construe the conduct, delays, or omissions of another as altering in any way its own agreements as set forth in this Agreement. Any waiver, allowance, or approval of any claimed breach or default under this Agreement must be in writing and no Party shall raise unwritten waiver or estoppel as affirmative defenses to such claimed breach or default.

21. **Cooperation.** NMED, the Applicants and the Interested Parties shall cooperate fully with each other and act reasonably and in good faith and in a timely manner in all activities under this Agreement so that each of them may obtain the benefits contemplated under this Agreement and for which they have negotiated. No Party shall unreasonably deny, withhold, or delay any consent or approval required or contemplated for any action or transaction proposed to be taken or made in this Agreement. NMED, the Applicants, and the Interested Parties shall consult with and assist each other in good faith and without delay as to all matters that require their cooperation.

22. **Assignment and Subcontracting.** No Party to this Agreement shall assign or transfer any interest or responsibility under this Agreement without prior written approval by all Parties; provided that the University may assign its rights and obligations under this Agreement to its successor as contractor for DOE and operator of LANL. In addition, no Party to this Agreement shall subcontract any portion of the services to be performed under this Agreement without prior written approval of all Parties.

23. **Obligation.** The obligations of the Parties to this Agreement are not affected by the actions of others who are not Parties to this Agreement.


24. **Headings.** The section headings and subheadings of this Agreements are used only for convenience of reference and are not intended and shall not be construed to modify, define, limit, or expand the intent of NMED, the Applicants, or the Interested Parties in this Agreement.

25. **Severability.** If any provision of this Agreement is held invalid or unenforceable, such holding shall not invalidate or render unenforceable any other provision of this Agreement.

26. **Delivery of Written Requests.** If the Applicants fail to deliver the written requests described in paragraphs 3 and 6 of this Agreement to the NMED within one business day after the date when the NMED notifies the Applicants that the last party has signed the Agreement, all Parties are released from their obligations under this Agreement.

27. **Integration.** This Agreement incorporates all the agreements, covenants and understandings between the Parties hereto concerning the subject matter hereof, and all such covenants, agreements, and understandings have been merged into this written Agreement. No prior agreement or understanding, oral or otherwise, of the Parties or their agents shall be valid or enforceable unless embodied in this Agreement.

28. **Facsimile Copies.** Signed copies of this Agreement that are sent by facsimile transmission to the Parties to this Agreement shall be treated as originals.

  
\_\_\_\_\_  
Secretary, New Mexico Environment Department

Date 9/14/05

\_\_\_\_\_  
\_\_\_\_\_, U.S. Department of Energy

Date \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_, University of California

Date \_\_\_\_\_

\_\_\_\_\_  
Concerned Citizens for Nuclear Safety

Date \_\_\_\_\_

\_\_\_\_\_  
Nuclear Watch of New Mexico

Date \_\_\_\_\_

\_\_\_\_\_  
Peace Action New Mexico

Date \_\_\_\_\_

\_\_\_\_\_  
Loretto Community

Date \_\_\_\_\_



\_\_\_\_\_  
Tewa Women United

Date \_\_\_\_\_

\_\_\_\_\_  
Embudo Valley Environmental Monitoring Group

Date \_\_\_\_\_

\_\_\_\_\_  
New Mexico Environmental Law Center

Date \_\_\_\_\_

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\_\_\_\_\_  
Secretary, New Mexico Environment Department Date \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_, U.S. Department of Energy Date \_\_\_\_\_

*Carolyn Massey*  
*LARC Assoc.* \_\_\_\_\_ Date *September 15, 2005*  
University of California

\_\_\_\_\_  
Concerned Citizens for Nuclear Safety Date \_\_\_\_\_

\_\_\_\_\_  
Nuclear Watch of New Mexico Date \_\_\_\_\_

\_\_\_\_\_  
Peace Action New Mexico Date \_\_\_\_\_


\_\_\_\_\_  
Loretto Community Date \_\_\_\_\_

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\_\_\_\_\_  
Secretary, New Mexico Environment Department Date \_\_\_\_\_

  
\_\_\_\_\_  
Assistant Manager for Environmental Stewardship Date 9/14/05  
Los Alamos Site Office  
U.S. Department of Energy

\_\_\_\_\_  
University of California Date \_\_\_\_\_

\_\_\_\_\_  
Concerned Citizens for Nuclear Safety Date \_\_\_\_\_

\_\_\_\_\_  
Nuclear Watch of New Mexico Date \_\_\_\_\_

\_\_\_\_\_  
Peace Action New Mexico Date \_\_\_\_\_

FROM : PEACE ACTION NM

FAX NO. :

Sep. 15 2005 09:10AM P1

Sep-15-05 09:13:14 NMELE

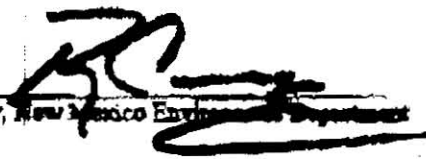
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26. **Delivery of Written Requests.** If the Applicants fail to deliver the written requests described in paragraphs 3 and 6 of this Agreement to the NMED within one business day after the date when the NMED notifies the Applicants that the last party has signed the Agreement, all Parties are released from their obligations under this Agreement.

27. **Integration.** This Agreement incorporates all the agreements, covenants and understandings between the Parties hereto concerning the subject matter hereof, and all such covenants, agreements, and understandings have been merged into this writing. Agreement. No prior agreement or understanding, oral or otherwise, of the Parties or their agents shall be valid or enforceable unless embodied in this Agreement.

28. **Facsimile Copies.** Signed copies of this Agreement that are sent by facsimile transmission to the Parties to this Agreement shall be treated as originals.

 Date 9/14/05  
Secretary, New Mexico Environment Department

\_\_\_\_\_  
U.S. Department of Energy Date \_\_\_\_\_

\_\_\_\_\_  
University of California Date \_\_\_\_\_

 Date 9.15.05  
Concerned Citizens for Nuclear Safety

 Date 9/15/05  
Nuclear Watch of New Mexico

 Date 9/15/05  
Peace Action New Mexico

 Date 9/15/05  
Loreto Community

NMED/DOE Univ. of California INTERESTED PARTIES  
Agreement on Air Quality Permit No. 2195-N

*Kathleen In Sandy*  
Tewa Women United

Date 9/15/05

Embudo Valley Environmental Monitoring Group

Date \_\_\_\_\_

*Douglas Winklesher*  
New Mexico Environmental Law Center

Date 9/15/05



Tewa Women United

*Slotowski*

Embudo Valley Environmental Monitoring Group

Date \_\_\_\_\_

Date *September 15, 2005*

New Mexico Environmental Law Center

Date \_\_\_\_\_

### *III. Transcript*

# **TRANSCRIPT**

of

## **Public Meeting**

### **Chemistry and Metallurgy Research Replacement (CMRR) Project**

**September 19, 2006**

[The meeting was called to order at 6:30 p.m. in the Fuller Lodge, Los Alamos, NM, by Meeting Facilitator Ed Moreno.]

[Slide 1]

[ED MORENO, Facilitator] Everybody's kinda spread out. Maybe if I could ask everybody to get a little bit closer to the middle so that we have a little more critical mass here and the speakers don't have to be spraying, spraying the whole Fuller Lodge with their voices and trying to be heard. [Pause] Can you hear me all right? We're being recorded here, so we are going to be paying attention to who has the microphone when they are speaking.

[Ed Moreno] Welcome everybody. My name is Ed Moreno. I'm the facilitator for this meeting. I'm filling in for Rosemary Romero who is the regular facilitator who is hired for this process, um, who had another commitment, and she and I have worked together on a lot of different projects, and so I'm filling in. I'm happy to be here. I live here in Santa Fe, there in Santa Fe, and I'm a facilitator and I do this kind of work for a living.

[Ed Moreno] Um, my job here is to set the stage for the presentation tonight and of course you know the, uh, many of you know the history of this. It's a fairly structured agenda, and what I'm going to do is go through some preliminaries. There will be presentations by the leaders of the various stages of the projects, of the project. We will ask for clarifying questions after each of the presentations so that everybody understands, understands what is being talked about. And then about half of the time has been reserved for questions, comments, public comments, anything that's on anybody's mind who wants to talk about the CMRR project. So, without any further ado, we'll get started.

[Pause]

[Slide 2]

[ED MORENO] I'm going to, I'm going to go through the preliminaries first, and then [pause]. Great. So here's the agenda. My part here is going to cover the welcome, ground rules, preliminaries. I'm going to ask everybody to introduce themselves. Steve Fong and Tim Nelson will give overviews of the project. Bill Blankenship and Mike Salmon. And there probably, how many slides are there? Like 40 slides or so? Um, and then, question and answer. I will moderate the proceedings after that, and then we'll take any requests for any topics for future meetings, and then that'll be the end of the program. If it takes two hours—we have allotted up until eight-thirty for this meeting.

[Pause]

[Slide 3]

[ED MORENO] For the purpose of this meeting, and this comes from the last, the previous meeting, the first meeting that was held that Rosemary facilitated, the participants here at that time agreed to and added some ground rules. And I just want to go over those again. Listen respectfully. Share the air time with other participants. Wait until you are called upon to speak. Turn cell phones off or on "mute." I'll repeat that one because that's a really important one. Turn your cell phones off or put them on "mute." No personal attacks. This whole process stems from a controversy, and controversy is, is a part of, any controversy is emotions and people's feelings and personal feelings and, ah, it's, it's easy to get carried away, but I'm here to enforce the no personal attacks, and, and you all can enforce that yourselves as well. And please speak slowly and clearly. This, this meeting is being recorded, audio recorded, and following the meeting it will be transcribed as the previous one was, and transcripts will be made available to whoever asks for them and especially the parties who are party to the settlement agreement that resulted in this series of meetings.

[ED MORENO] Are there any other ground rules that anyone would like to suggest?

[MORRISON BENNETT, transcriber] Please, everyone, say your name when you talk.

[ED MORENO] Thank you.

[MORRISON BENNETT] Thank you.

[ED MORENO] I was going to get to that.

[Pause] [Sound of marker on flip chart.]

[ED MORENO] That's especially important because this is being recorded, and the person who does the transcription will be, eventually will be able to match the names with the voices. So, I will ask everybody to introduce themselves. Any other ground rules? Yes?

[PHIL WARDWELL] I just wanted to, uh, develop something. My name is Phil Wardwell.

[Wardwell gets microphone] My name is Phil Wardwell. Some of the parties, some of the groups who signed the original agreement, settlement agreement, have sent an email and said they could not be here tonight, but specifically requested to receive uh, a transcript or whatever record we could make of the, what we say here tonight, and so, for their sake as well, uh, we should all make an effort to speak slowly and clearly so the transcript can be made.

[ED MORENO] Great. Thank you. Any other ground rules you wanna propose?  
Okay.

[Slide 4]

[ED MORENO] Okay. This is a slide from, from the previous meeting as well. This is the background and the purpose in a little bit more detail, with, especially with regard to who

the parties are. The settlement was, the settlement agreement provided for segmented air permitting to match phase project development and public involvement. In other words, a structured way for the public to be involved in the ongoing air permitting process. And these are the parties; you can read them, and if you picked up the packet at the table out in front you have a copy of that in the packet of slides that you will see here tonight. All of these groups are involved and these meetings are supposed to be held every six months to update the public on CMRR construction progress. Um, and I think that's it. I think I will ask everybody to introduce themselves. Just go around the room with the microphone, and so that the, your names can get picked up on the audio and then we can start regularizing that practice a little bit. Go ahead Lorrie [Bonds Lopez].

[LORRIE BONDS LOPEZ] I'm Lorrie Bonds Lopez. I'm the coordinator for this, this series of meetings. One of the coordinators. And I work for the Laboratory.

[GREY WILBURN] I'm Gray Wilburn.

[DIANNE WILBURN] I'm Dianne Wilburn. I'm the group leader for the Ecology and Air Quality Group at the Laboratory.

[DEBORA HALL] I'm Debora Hall. I work in environmental outreach at the Laboratory.

[AVERA MAGNUSON] I'm Avera Magnuson, just a listener, just a listener.

[PHIL WARDWELL] I'm Phil Wardwell. I'm with the legal office at the Laboratory.

[ROGER SNYDER] Roger Snyder with NNSA.

[JON VENTURA] Jon Ventura with the Lab.

[BRYAN KOEHLER] Bryan Koehler with the CMR project.

[CRAIG BACHMEIER] Craig Bachmeier, with the Lab.

[DAVID WEATHERBIE] I'm David Weatherbie, Austin Commercial.

[MIKE SALMON] My name is Mike Salmon, with the Laboratory.

[TONY LADINO] I'm Tony Ladino. I'm with the Laboratory too.

[ED MORENO] Go ahead.

[EVERETT TROLLINGER] Everett Trollinger. I'm with NNSA. I'm a federal project director on the project.

[GLENN BANKS] Glenn Banks. Member of the public.



[JACKIE HURTLE] Jackie Hurtle with the Air Quality and Permitting [Group].

[DAVID FUEHNE] David Fuehne with the Laboratory's rad air missions group.

[MORRISON BENNETT] Morrison Bennett. I'm your transcriber.

[STEVE FONG] Steve Fong. I'm a part of the federal team on this project. Federal project director. And a presenter tonight.

[BILL BLANKENSHIP] Bill Blankenship. I work for the Laboratory on air quality permitting and speaking tonight.

[TIM NELSON] Tim Nelson. I'm the Laboratory project director for the CMR replacement.

[ED MORENO] Great. Thank you all very much. Um,

[UNIDENTIFIED PERSON] We missed a person over here.

[Inaudible words from the audience]

[ED MORENO] No, he's, we took him out of order.

[UNIDENTIFIED PERSON IN AUDIENCE] Okay.

[ED MORENO] We jumped from the back row to the middle row. Is there anyone here from the public? There's one hand that came up. Okay.

[Inaudible words from audience]

[ED MORENO] Oh, I'm sorry. Okay, there are two, two from the public, and the rest are related one way or the other to the Laboratory or the project. Can I see a show of hands of who would like to make comments when we get to the public comment period? Are you prepared to, maybe you will hear something that you, that will prompt a comment on your part? Okay, well then this will be a, uh, perhaps, a pretty short meeting. But I think it will be a—I've seen this slide presentation and it's very interesting, and if you haven't seen it, I think you'll find it interesting too, even if, no matter how close you are to the action. So, with no further ado, I'll turn this over to Steve Fong. And if you can come over—oh you have your thing. The red—the red thing is the laser pointer and this is the advancer.

[STEVE FONG] Okay. Thank you.

[Pause]

[UNIDENTIFIED PERSON] Oops.

[UNIDENTIFIED PERSON] That was him turning off.

[UNIDENTIFIED PERSON] Okay.

[STEVE FONG] I'm Steve Fong again. Federal project director on the CMRR project. I'm a federal employee with the Los Alamos Site Office.

[TIM NELSON] I'm Tim Nelson. I'm the project director for the Laboratory on the CMR replacement project.

[Slide 5]

[STEVE FONG] So, we'll be your presenters tonight. Let me see if I could work this machine, and everybody can see me, right? See the screen?

[Slide 6]

[STEVE FONG] We held this, our last public meeting about six months ago, and we had it transcribed. We also received some written comments, and wanted to go through what we heard last time. We heard that there was a request for agenda time for other people to make presentations. I think we can make some allowances for that, given some time ahead of time when we formulate the agenda, and that we could work the presentation with all parties to make sure that it's acceptable. And it probably should be CMRR related.

[STEVE FONG] Request for meetings at other locations. I think this is an open subject. However, the next several meetings, I think I will request to have those meetings held here in Los Alamos since a lot of the analysis that we're doing impacts directly people within the county. And I think it makes a lot of sense for us to hold the meetings here so the people that live in the county can hear about those impacts.

[STEVE FONG] Request for an August conference call to set the—this meeting's agenda. That was done. We received no interest on a, on a conference call. Request for a presentation from EPA, George Brozowski specifically. George actually had several requests to come out here. And he's actually gonna' be here in the end of October, at least planning to, and he's gonna come out with uh, in relation to the New Mexico Environment Department CRMG meetings, which stands for Community, Community Radiation Monitoring Group. And that's a planned event and it's well publicized.

[STEVE FONG] A request for a presentation from the Defense Nuclear Facility Safety Board. Uh, I provided that information to the board. They are not here this evening.

[STEVE FONG] An explanation how CMR fits into the sitewide environmental impact statement. Um, if you notice in the handouts we do specifically discuss how the CMRR project is, fits within the relationship of the SWEIS.

[STEVE FONG] Transcript of the meeting available on CD. That's actually available in the back of the room.

[STEVE FONG] And then we had general comments that we equally shared. So, with that I'm going to pass over this laser, this advancer, to Tim Nelson.

[Slide 7]

[TIM NELSON] I'm gonna give you the background on the project for those people that weren't here last time. And then we'll give updates on where we're at and how things are going and a variety of other topics, bring you up to speed.

[TIM NELSON] One of the things that came up in the last meeting was the difference between what we're supporting in terms of capabilities with the buildings for CMR replacement relative to the programs that are going on. And probably a good example of that, if you looked at one of the handouts that we had from the groundbreaking ceremony, it said that we're supporting pit manufacturing. And the question that came up was "Well is that pit manufacturing in the context of actually making pits in the CMR replacement building or is it some support activities related to making pits. And it's actually the support activities of analytical chemistry and materials characterization and actinide research and development. So I'll once in a while use ACMC, which is analytical chemistry and materials characterization, and R&D is research and development.

[TIM NELSON] But, bottom line is, relative to replacing the existing CMR building which was built in 1952, it's an aged facility. There was a study done in around the '98 time period to look at how we would upgrade the existing building and whether or not we could continue to operate it safely over a long time period; and the decision at that time was that we would plan an end-of-life of that building around 2010. And through a series of other documents, including the CMRR environmental impact statement, determined that we would build a new building, or new sets of buildings, which is the CMR replacement project and replace those capabilities that are provided by the existing CMR Building. And those would be analytical chemistry and materials characterization and actinide research and development.

[Pause]

[TIM NELSON] The "L" button.

[Inaudible speech while projector is being adjusted.]

[Slide 8]

[TIM NELSON] Thanks Ed. So the project is split into three phases. Um, the first phase, which is under construction right now, and David Weatherbie, who is in the audience, actually represents Austin Commercial, which is the contractor doing this construction of the Radiological Laboratory Utility Office Building. And a good way to look at this building is, it's actually a support building for the major building of the nuclear facility. Um, the Radiological Laboratory Utility Office Building provides utilities, provides a radiological laboratory space of about 20,000 square feet, provides office space, um, a variety of other functions including training facilities for the TA-55 site. TA-55 site is where these buildings are gonna be located at the Laboratory.

[TIM NELSON] As of today, this number changed from 36% final design complete to 42% final design complete. And if you went out to the TA-55 site you would see that there's actually a variety of earth work occurring right now, which is part of this building's construction.

[TIM NELSON] Phase B is the equipment that goes in either the radiological laboratory or the nuclear facility and essentially is containment devices that we call glove boxes for the radioluc—radionuclides. Excuse me. And also the instruments, the analytical chemistry instruments, which are those characterization instruments and equipment associated with actinide research and development. That phase is in preliminary design, um, and essentially we're looking at going out for acquisition of, uh, the final design and procurement of Phase B in 2007.

[TIM NELSON] Phase C is the nuclear facility portion. Um. The way we describe nuclear facilities is Security Category I, which has to do with levels of material at the facility and Hazard Category 2, which has to do with the safety component related to what type of confinement we need in that facility. [As an aside] Let's take it.

[TIM NELSON] The glove boxes are used as one portion of the confinement. As well as the facility structure itself. There's a vault associated with the nuclear facility, which can hold up to six metric tons of plutonium-239 equivalents and large vessel handling.

[TIM NELSON] The other part of the construction activity out at the TA-55 site is seismic investigation associated with this nuclear facility where we're digging out part of the construction area where the nuclear facility would go to determine if there's any seismic concerns associated with that site, and Mike's going to talk about that a little bit later, today.

[Slide 9]

[TIM NELSON] This is the TA-55 site. One of the things that we are looking at is consolidating the nuclear operations of the Laboratory into one site. And by doing that we can save a fair amount on money but also become more efficient in terms of operations. Between, say, the buildings of our radiological laboratory and this nuclear facility and the existing plutonium facility at TA-55.

[Pause]

[Slide 10]

[TIM NELSON] As far as the timeline for the three phases, we're in design and construction on Phase A right now. One of the questions that came up was, "when does construction start, and what is the definition of 'construction' versus 'design.'" And probably the best way to describe that is, when we start pouring concrete, I call that "construction," when we are pouring the foundation of the facility. Um, such that the site preparation that we are doing now, where we are digging out and preparing the area to go pour that concrete isn't what we would consider "construction." And the design packages that allow you to pour the concrete would be finalized and approved before we'd actually start pouring the concrete.

[TIM NELSON] We expect to have a limited operational capability for replacing some of the existing CMR processes, mainly analytical chemistry type processes, with the radiological laboratory before the 2010 time period proposed—end-of-life of the existing building, CMR Building.

[Tim Nelson] [Continuing to point to portions of the slide] Phase B, we're in preliminary design; and final design, required tests, actually runs out significantly longer as we support the nuclear facility portion as well. And nuclear facility is obviously the longer activity for us, runs out into the, essentially calendar-year-13 time period.

[TIM NELSON] There is one other component of this timeline slide that has to do with the existing building and the disposition of that building, what we call decontamination and [pause] uh, destruction [laughs]. Excuse me. That would start essentially about the time of the end of, or the start of the nuclear facility, we'd start D&Ding, dispositioning the existing CMR Building. Thank you Tony. [Laughs.]

[TIM NELSON] Any questions?

[ED MORENO] I'll invite questions at this time. The overview? Any questions on the overview? [Pause.] Anyone? Okay. Back to over to Steve [Fong] for—for the next several—several presentations on the environmental issues.

[Slide 11]

[STEVE FONG] Okay, this is Steve Fong talking again. I'm back up on stage. I'm gonna through, uh, we are gonna go in further detail on a couple of ES&H topics. I wanted to give an update on specific ES&H issues as it relates to the Rad[iological] Lab[oratory] Utility Office Building. Bill [Blankenship] will be up here in a second to talk about air permitting and Mike Salmon, nicely dressed Mike Salmon in the back, uh, will talk about the seismic investigation. Heh, heh.

[Slide 12]

[STEVE FONG] Uh, this is a slide that we used in the last meeting, and I think that the main point here to discuss is that all ES&H activities for the Rad Lab Utility Office Building have been complete[d], with one exception. And one of the exceptions is that we are going for a LEED certification for sustainable design for the rad lab utility office building. Tim noted that we are about 40-plus percent into final design. At the same time we need to do an analysis to determine how we are going to achieve our LEED certification.

[Slide 13]

[STEVE FONG] So, what is LEED certification? LEED is “leadership in energy and environmental design.” It's a voluntary independently verified consensus-based national standard for designing and constructing sustainable buildings. It lays out the criteria we need to ensure that we can stamp this as, and what we're trying achieve as, silver certification. And based on our design at this point, doing our analysis, we are finding that we are nearly there to achieve in design what we believe will score out to, to silver certification. Right now we have 29 of the 33 points of, that are available for LEED, to achieve certification at silver.

And based on what we know, I think we can safely say with the 11 additional possible choices that we're, we're well on our way to achieving that certification.

[STEVE FONG] The website is further information where you can actually look at the criteria and learn more about the LEED certification.

[Pause]

[Slide 14]

[STEVE FONG] A little bit more about the analysis for the rad lab: um, this provides the breakout of our scoring as of today. The first, there are categories in which the scoring takes place. For instance, sustainable sites, that is a category of, under LEED, in which we can do some analysis. Of the 14 points available, we right now are pretty confident that we can achieve 11 of those points, and there are three possible additional points that we think with some work and some innovativeness, some hard work and sharpening of the pencils, we can gain possibly three more points in that area. It is under contract with Austin Commercial to, uh, assure that we do receive a certification of silver.

[STEVE FONG] And with that, I think we are gonna start up with Bill Blankenship.

[ED MORENO] But first— But first—this is Ed Moreno speaking—and I'm going to invite any questions for Steve [Fong] on the ES&H [inaudible].

[STEVE FONG] [Inaudible words]

[ED MORENO] Leave it on.

[STEVE FONG] Okay. [Pause] Are there any questions?

[ED MORENO] Are there any questions? [Pause] Are there any questions on this section? Okay. Bill Blankenship.

[Slide 15]

[BILL BLANKENSHIP] All right. Thanks.

[BILL BLANKENSHIP, continuing with microphone]. I'm Bill Blankenship. I'm in the Lab's air quality group or Ecology and Air Quality [Group], um, and have a just a very brief overview of the remaining air permits that we need to get for the CMR replacement project. Um, and it's a pretty non-technical presentation, just take 10 minutes or so. This time frame actually shows, um, a time frame for two different permits. We really need two different Clean Air Act permits for the nuclear facility. And I'm gonna talk about one of those right now. The one I'm not going to talk about is on the bottom here. Um.

[BILL BLANKENSHIP] The way this is divided up you need, um, one air permit for any non-radiological air emission, so in slang we call it the "non-rad air permit." And then, the second air permit you need, ah, that's for any potential radionuclide emissions from the facility that we want to construct. The reason it's divided up this way, um, you might think life would be

simpler, just put it one application. I know a lot of people in the public feel that way, but, um, legally, statutorily, it's just impossible. Um. The State of New Mexico doesn't have authority to issue the so-called "rad permit" on the bottom. You apply to the US EPA Region VI in Dallas for that permit. Whereas on the top, the permit I'm going to talk about, we apply to the New Mexico Environment Department, the NMED in Santa Fe, for that permit. So, it's two different processes.

[BILL BLANKENSHIP] We are working now on the non-rad permit, ah, moving along on it. We are looking at submitting it in November. After that, as the slide says, NMED will provide public notice, public participation, and issue a permit. The time frame on that, um, it's really undefineable. It could take four months, it could take a year. It really depends on so many different things, whether there's a public hearing, for instance. Um, down on the bottom, the rad permit application, um, start preparing it in November of this year. There's going to be a public meeting just on that application, similar to the meeting tonight. That's a requirement in the settlement agreement. We are looking that in March, wrapping that up, responding to the comments, submitting the application to EPA in Dallas in May, and obtaining EPA approval in July of '07. Um, pretty short process. I think EPA is bound to issue that in, I believe, sixty days. A very short process.

[Pause]

[Slide 16]

[BILL BLANKENSHIP] So the non-rad air permit, what I'm gonna give you an overview of, as I said, we are submitting this to the NMED to in Santa Fe, the Air Quality Bureau. It's for the non-radionuclide emissions. Later on I'll tell you what those emissions consist of. And this will be reviewed under the rule that's cited, um, "construction permits," you know we're calling it a "non-rad air permit." Technically it's called a "construction permit." The thing to keep in mind is you can't start construction of a new facility until you get this permit. So in air jargon, it's called a "construction permit." And actually, not to make it too complicated, but, um, it's not an entirely new permit for the nuclear facility. This is actually a modification to the air permit we already obtained for Phase A, the rad lab. I'll talk about that in a minute.

[Slide 17]

[BILL BLANKENSHIP] So what are the air emission sources? You know this is a very complex and expensive facility, but as far as air quality, it's not that complicated for the non-rad air emissions. I mean, to me, working in air quality for many years, it's—it's pretty straight forward; um, the air emission sources, the facility needs natural gas-fired boilers; we need hot water for personal comfort as well as hot water for some of the processes. We need diesel-fired standby equipment. Um, um, any modern facility needs that in case of a power failure, so we can have power to address safety and security concerns. There's a process called "metallography" in which samples containing beryllium are prepared. The only reason this is an air emission source is because it involves beryllium. In that process there's grinding, cutting, polishing, a very small beryllium, what are called "samples." Potentially there is an air emission. Because it's beryllium, it's captured in a Clean Air Act regulation written just for beryllium.

[BILL BLANKENSHIP] As with any laboratory there's some very small-scale usage of, ah, chemicals. And when I say laboratory scale, I really mean that, this is a very small quantity of chemicals compared to say, a manufacturing facility. The most predominant chemicals are actually liquids at room temperatures. Very common chemicals in any laboratory. I think nitric acid, sulfuric acid are probably the two that are used in the greatest quantity.

[Slide 18]

[BILL BLANKENSHIP] What air pollution controls will be used? You know, really the biggest air emission source when you look at non-rad air emissions are the boilers. They use natural gas, very, the cleanest fossil fuel that you can get. But the boilers will have what are called low-NOx burners to reduce the predominant, or the pollutant of most concern from a gas-fired boiler—is called NOx or nitrogen oxides. The low-NOx burners, um, it's built into the boiler itself. It basically stages the combustion in the boiler so the flame temperature of the boiler is reduced. And if you have a lower flame temperature, you have a lower NOx emission. That effort is voluntary, it's not required to meet any State of New Mexico or EPA or quality rule, but it will reduce that main pollutant from natural gas combustion.

[BILL BLANKENSHIP] The beryllium samples, um, will be conducted within a glove box. Um, the grinding, cutting, polishing I mentioned, they use lubricants when that is going on. So it's highly unlikely there's—there's an air emission to begin with. If any beryllium particulate did escape the lubricant—there's a series of four different HEPA filters, very efficient at removing small particles. I think each one has a control efficiency of 99.95%.

[Slide 19]

[BILL BLANKENSHIP] Uh, what will the environmental impacts be? Of course, that's always an important consideration. Um. The air emissions from the boilers, like I mentioned, to me, working in this field, that's the biggest air quality concern. They'll have minimal impacts. And why can I say that? Because we already conducted what's called dispersion modeling for the boilers when we got this initial permit for Phase A. We have to do that modeling again in this application, but to give you an idea, the air pollutant NOx, we did that modeling, um, the highest concentration we saw anywhere, using an EPA- and NMED-approved model was something like seven micrograms per cubic meter. The very stringent New Mexico 24-hour standard for NOx is 150 micrograms per cubic meter. So the maximum impact was, was so very far below the, the health-based standard. And when we do the modeling again I suspect we'll find the same outcome.

[BILL BLANKENSHIP] The metallography, beryllium emissions—we don't anticipate there'll be any measurable beryllium emission from that activity. We've seen that over the years. There've been a number of what are called “stack tests” on the Lab's beryllium operations. We're yet to find any measurable beryllium from those tests. And we think that'll be the case here. It's the same activities, um, in that metallography operation that [is] currently conducted today at the CMR and TA-55, and they are simply being relocated to the new facility.

[BILL BLANKENSHIP] As far as chemical usage, um, we know now, I mean, we've already looked at this before when we worked on the initial application for the permit that we have



for the rad lab and I'm confident again, any chemical usage will be below any quantity that requires any specific regulation by the EPA or NMED. The quantities are just so far below those thresholds, basically EPA, you have to emit, um, ten tons of what's called a hazardous air pollutant to come under specific regulation. You know, using conservation estimates, um, these hazardous air pollutant emissions from this project will be far below one ton per year. And we also believe, based on our prior work, that uh, none of what are called "toxic air pollutants" will be over the air thresholds set by the NMED either. So, you know, in essence, we think the environmental impacts, air-quality-wise, will be, ah, very minimal, well within standards.

[Slide 20]

[BILL BLANKENSHIP] I thought this would be helpful if people from the public were here. I'm just uh, wanted people to know that there's many ways to get involved here other than coming to these six-month meetings. Um, on our part, for this application, ah, we always do this. We'll have a complete copy of the application on our website, our public website shown on the slide.

[BILL BLANKENSHIP] The construction permit reg, it's, um, very demanding as far as public notice and public involvement, ah, probably more so than most states in the country. Um, as part of application we have to provide public notice by newspaper and radio. We do a direct mail to nearby citizens. That's, uh, I think, a direct mail to four or five hundred different households living along the Lab boundary. Um, NMED on its part will again provide its public notice in newspaper[s]. You can get on a list and they'll send the notice directly to you if you like. And during the process, ah, there's just so much opportunity for public comment. You can request a public hearing as well from the Air Quality Bureau [of NMED].

[BILL BLANKENSHIP] That's the overview.

[ED MORENO] Very good. Thank you Bill. Are there any questions on the air quality permit section? If there are none, then I will ask Mike Salmon to come up to talk about the seismic investigation update.

[BILL BLANKENSHIP] Do you wanna' use that?

[MIKE SALMON] Sure, I think I have to.

[MIKE SALMON] My name is Mike Salmon. I've been at the Laboratory for about 10 years now. I was brought to the Laboratory to assist in natural phenomena hazards mitigation. I've been looking at seismic issues for the past 10 years, and primarily we look at structures, and we try to understand how they behave to earthquakes. Most recently I've been managing a project to update the probabilistic seismic hazards assessment at the Laboratory.

[Slide 21]

[MIKE SALMON] I was asked to give a presentation on the work that we are doing right now and how it directly impacts CMRR. So, I'm going to be talking about the CMRR

earthquake investigations. It's a brief talk. It's kind of a high-level talk about basically why we need earthquake design in New Mexico. What are the design requirements, how is this earthquake hazard information used, and what's been completed to date.

[Slide 22]

[MIKE SALMON] So, first of all, why do we even need to design for earthquakes in northern New Mexico? Well, basically, earthquakes are a natural phenomenon and occur out, occur throughout the United States of America. This is a plot, I don't know if you can see it very well.

[UNIDENTIFIED PERSON] [Inaudible question]

[MIKE SALMON] This is taken from New Mexico Tech. They've compiled a historical catalog of earthquakes in New Mexico that go back to 1869. The plot that you see here shows, uh, the instrumentally recorded earthquakes that have occurred from 1962 to 1998. I don't know if you can see it very well, you can see all the red dots in here are actually epicenters of earthquakes with magnitudes greater than 2.0. So, what I wanted you to take from this slide is that earthquakes do occur in New Mexico, and we have to design for them.

[MIKE SALMON] Not only do earthquakes occur in New Mexico, but, we also need to comply with state and federal law. LANL complies with both the 2003 International Building Code as adopted by the State of New Mexico for our new construction, and we also have to comply with US Department of Energy federal orders. In addition to that, structural engineers will also analyze buildings for these rare loads such as earthquakes, such as snows, such as very high winds, very infrequent loads, to assure that during the life of the facility failure from any of these loads is, is very remote.

[Slide 23]

[MIKE SALMON] So how do we determine the earthquakes that we actually design for, the earthquake ground motion that you would actually design for? Primarily, when you are doing this hazards analysis, the first thing you will do is you'll assign earthquake sources to either regions, where earthquakes are kinda uniformly distributed throughout a region, or to known faults where you know that there's a defined feature that may be a source for earthquakes to occur.

[MIKE SALMON] In our seismic hazards analysis, right now there are three major regions that we've considered as potential locations for earthquakes to occur: the Great Plains, the Colorado Plateau, a large section throughout the center of New Mexico called the Rio Grande Rift, and then there's a very interesting feature in New Mexico called the Secorro Seismic Anomaly. The majority of earthquakes in the historical catalog have actually occurred in this location, even though it occur—even though it has only, I think, 1.7 percent of the total geographic area of the state, the historical catalog attributes more than 40 percent of the actual earthquakes to this little area. So, kind of an interesting site.

[MIKE SALMON] We've been looking at earthquakes and causative features of earthquakes here at the Laboratory for at least the last 30 years. And that—that's ongoing.

[Slide 24]

[MIKE SALMON] These are the known faults that we're addressing in the update to our probabilistic seismic hazards analysis. The DOE orders require that we look at all known faults within a hundred kilometers of our site. So this is just a map of the faults that are also included in our seismic hazard[s] analysis.

[Slide 25]

[MIKE SALMON] What are the design requirements? If you are designing a commercial structure, the New Mexico Building Code requires that you look at what they term a "maximum considered earthquake." That's the, by definition, is the most severe earthquake effects considered by the code. The maximum considered earthquake in the building code is defined as an event that occurs, on average, once in every 2500 years. You get that information from the United States Geological Survey, National Earthquake Hazard Mapping Project.

[MIKE SALMON] The US Department of Energy requires a little bit more stringent level of rigor when they are doing the earthquake design in that they'll require that we do a site-specific hazards [assessment]; we don't just rely on what USGS provides, but we'll do a site-specific hazards assessment for our more critical facilities.

[MIKE SALMON] The seismic hazard is determined in accordance with DOE rules. It involves participation by the Defense Nuclear Facility Safety Board and we also have a steering committee on our project that has a representative from USGS that's very well known. He participates in the National Earthquake Hazards Mapping Project, a gentleman from the University of Utah that's doing peer review, and then a consultant from the City College of New York.

[Slide 26]

[MIKE SALMON] What goes into determining the actual earthquake hazard that you have to design for? Four basic steps. One is the definition of earthquake sources. We basically already talked about that. That's been done. And then, you need to define how active earthquakes are on those sources, or you need to define a relationship on the frequency of those earthquakes occurring on any sort of a, an annual basis. That's been done.

[MIKE SALMON] Then once you have an idea for how frequently earthquakes occur and the locations at which they originate, you need to have an estimate of what that ground motion would look like once it gets to your site, the CMRR site. Um, that's been done. And then what you need to do, is you need to look at all possible locations and all possible earthquakes, and integrate that to determine an annual frequency of exceedance of a given ground motion. And that's what's the final step. It's called the hazards analysis. And that's what we are completing right now.

[Slide 27]

[MIKE SALMON] How is that information finally used at LANL? We have an engineering standards manual that provides these coefficients to use in the International

Building Code for use in commercial design, PC-1, PC-2 type facilities. Um, and other information that is used by structural engineers completing the more rigorous analysis of nuclear facilities, such as CMRR, is also provided.

[Slide 28]

[MIKE SALMON] What's been completed to date, specifically for the CMRR project? We've done a lot of significant geotechnical work. Uh, we've completed the investigations of the subsurface, geomechanical properties at the site, and we've recommended geotechnical design parameters. Um. We've also provided to the CMRR project team preliminary design parameters from the PSHA [probabilistic seismic hazards assessment] project. Those include, um, a design response spectra, acceleration time histories, strain-compatible soil properties. And near-term, what we're doing is, we've got a team of, uh, geologists from EES-9 looking at the excavation to determine, uh, to map any features that may affect the design. And then we are also in the final phases of documenting our PSHA study. Ed?

[ED MORENO] Thank you Mike. Uh, a lot of seismic-specific terminology in there. Are there any questions for Mike [Salmon] before he sits down?

[Pause]

[ED MORENO] Anybody with a question? Okay.

[ED MORENO] I think we are ready to turn it back over to Steve [Fong] now for [pause, chuckles, handling microphone] for final words on the, to wrap things up.

[Pause]

[Inaudible whispering]

[Unidentified person] Yes?

[Slide 29]

[STEVE FONG] So, I'm going to wrap things up now. I just wanted to point out a few very important points, uh. CMRR is a replacement capability for a current mission, current capability at the site that's seen its design life. And that's at 2010. That is our, our mission. Our objective for the project is to provide a replacement capability for the current facility. Uh, this current facility is, uh, it's central, and it's core to our mission assignments here at the Laboratory. Um, but when we build this, we are gonna do this thing smartly. We will make sure that it's responsive, that the infrastructure can support the next fifty years. And to do that effectively and efficiently. Um, and key is the safety, and making sure that we do the right things for the next fifty years. So, in the end, CMRR will be a safe, secure, and modern facility. Um, [pause] last slide.

[Slide 30]

[STEVE FONG] For the next meeting that will held about six months from now, I thought, uh, again that's about time we are going to be developing and submitting our radiological air permit [application] to EPA, and that will be a timely subject for discussion

at the next meeting. And of course we have to, and we will, be providing a general status update of where we are at with the project.

[STEVE FONG] I want to thank everybody for showing up and coming out here tonight. We'll welcome any comments and, did everybody see that stinkbug that walked through? That was pretty exciting, 'cause Mike Salmon was up here presenting and he was walking all around the stinkbug, and I'm glad he didn't step on it, Mike, and he went on his way. So.

[Slide 31]

[ED MORENO] Protecting the environment every day, in every way.

[Ed Moreno] Okay, thank you. Steve [Fong], this is Ed again, and it's that time of the program where we will ask if there's any additional public comment on this issue. We did have a couple of additional people come in. If you are members of the public and you want to say anything about this presentation, the floor is open.

[UNIDENTIFIED PERSON] You did a great job. [Laughter from Ed and others] Especially Steve [Fong] over there.

[ED MORENO] Okay. Okay. Well, um, then let me ask then, we had one additional ground rule that was added, [pause, writing on flip chart] and the next topic issue, the next meeting topic question, um, that Steve [Fong] asked, um, is there a limitation on what can be talked about at that next meeting scheduled for March? I understood that it, that it's limited to, to that topic.

[UNIDENTIFIED PERSON] [Inaudible words]

[ED MORENO] Can anybody address that here?

[UNIDENTIFIED PERSON] [Inaudible words]

[STEVE FONG] If I can get the microphone.

[ED MORENO] Yeah.

[STEVE FONG] This is Steve Fong.

[ED MORENO] This is—

[STEVE FONG] It's not turned up.

[UNIDENTIFIED PERSON] It's on.

[UNIDENTIFIED PERSON] Okay.

[UNIDENTIFIED PERSON] I didn't touch it.

[STEVE FONG] We have to provide a briefing on project status, for CMRR. I think it should in relation to the CMRR project. So, with that, I think it is pretty much open. We'll try to adjust where we can in the areas of interest.

[UNIDENTIFIED PERSON] Okay. [Thereafter followed inaudible speech.]

[UNIDENTIFIED PERSON] Sure. [Thereafter followed more inaudible speech.]

[ED MORENO] It was part of Bill's presentation, the rad permit summary. Is that right?

[BILL BLANKENSHIP] That will be an item.

[ED MORENO] Can you give Bill the microphone? Bill Blankenship.

[BILL BLANKENSHIP] That will be an item, I think we are still talking about, ah, [pause, sound of writing on flip chart] ah, whether that application will need it's own meeting or not. We don't know the answer tonight.

[ED MORENO] Okay. So, thank you Bill. Any other recommendations or plans from the project leadership about what, where the project is going to be at that time? March-ish, that you are going to be able to talk about. Will, for instance, will the seismic investigation be, be completed by that time, or, or will there [be] other benchmarks [that] have been crossed by that time? Can, can you answer that?

[TIM NELSON] I didn't know if that was a question or not.

[ED MORENO] It was.

[UNIDENTIFIED PERSON] Yeah.

[TIM NELSON] The PSHA [probabilistic seismic hazards assessment] for the, for LANL, and for CMRR specific[ly], will be finished by March.

[ED MORENO] Okay. So is it okay if I write this down as a potential agenda item.

[TIM NELSON] It's fine with me.

[ED MORENO] [Laughs] I'll write it down. [Pause. Sounds of marker pen on paper.] Okay. Any other benchmarks that you can envision that it will be appropriate to talk about at that time? Anyone who's involved with the project? Yes? Give us your name and ...

[DAVE FUEHNE] This is Dave Fuehne. I have a question for Steve and Tim. Will there be actual, the RLOUB [Radiological Laboratory Office Utility Building], will that be in

concrete being poured and everything by then? or will there be something in actual building by then? on it's way up?

[Pause]

[TIM NELSON] This is Tim Nelson. Yeah, we'll have a, what we'll do at the next six months, we'll show a bunch of photos of the evolution of the rad lab construction activity.

[Sound of marker on flip chart.]

[STEVE FONG] This is Steve Fong. We also made some nice posters up here, so you can see exactly what is being constructed, and specifically for the rad lab, so please, after this meeting, if you have any questions or would like to see, what specifically, what we are designing for, please come up and see the nice pictures.

[ED MORENO] All right. Any other recommendations for agenda items for the next time? [Pause] Any other comments on anything? [Pause] Okay. Well then, I think that's the end of our business today. So, I want to thank everybody, the members of the public who are here. And uh, as, just to repeat again, the various groups that are part of the settlement agreement here, several of them notified the Laboratory that they were not going to be available, uh, for, for other reasons, but that this tape is uh, this meeting is being recorded and they will be given a copy of the transcript as soon as it's available, and any other member of the public presumably can, can have access to that as well. So, if no one has anything else to say, have a great evening. Thank you for coming.

## **CERTIFICATION**

I hereby certify that the foregoing is a true and correction transcription of the recording of the public meeting about the Chemistry and Metallurgy Research Replacement Project held at Fuller Lodge, Los Alamos, New Mexico on September 19, 2006.

/s/ Morrison Bennett

## *IV. Slideshow*



# Chemistry and Metallurgy Research Replacement (CMRR) Project

## Welcome

## CMRR Project Update

Fuller Lodge, Los Alamos, New Mexico  
September 19, 2006

Ed Moreno, Meeting Facilitator

# Agenda

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6:30	Welcome Ground Rules Background and Purpose Briefing on Public Comment Provisions Introductions	<i>Ed Moreno</i>
6:45	CMRR Project Update <ul style="list-style-type: none"> <li>- Environment, Safety &amp; Health</li> <li>- Air Permit Application</li> <li>- Seismic Investigation</li> </ul>	<i>Steve Fong, Tim Nelson</i> <i>Steve Fong</i> <i>Bill Blankenship</i> <i>Mike Salmon</i>
7:25	Question and Answer	<i>Ed Moreno</i>
7:30	Public Comment	
8:15	Requests for Topics	
8:25	Thank You and Adjourn	<i>Steve Fong</i>

# Ground Rules

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- Listen respectfully
- Share the airtime with other participants
- Wait until you are called upon to speak
- Turn cell phones off or on mute
- No personal attacks
- Please speak slowly and clearly

# Background and Purpose

---

- Settlement provided for segmented air permitting to match phased project development and public involvement
- Parties included
  - New Mexico Environment Department
  - Department of Energy
  - University of California
  - Concerned Citizens for Nuclear Safety
  - Nuclear Watch of New Mexico
  - Peace Action New Mexico
  - Loretto Community
  - TEWA Women United
  - Embudo Valley Environmental Monitoring Group
  - New Mexico Environmental Law Center
- Meeting is held every six months to update the public on CMRR construction progress

# Chemistry and Metallurgy Research Replacement (CMRR) Project

## CMRR Project Update

Fuller Lodge, Los Alamos, New Mexico  
September 19, 2006

*Presented by*

**Steve Fong, LASO**

**Dr. Timothy O. Nelson, LANL**

# What we heard at the last meeting

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- Request for agenda time for other presentations
- Request to hold meetings in other locations
- Request for August conference call to set the September agenda
- Request for a presentation from EPA (George Brozowski)
- Request for a presentation from the Defense Nuclear Facilities Safety Board (DNFSB)
- Explanation on how the CMRR fits into the Site Wide Environmental Impact Statement (SWEIS)
- Transcript of the meeting available on CD
- General concern for nuclear safety (exposure of the workers and the public to radioactive materials)
- General concern for environmental protection
- Request that everyone talk more slowly and clearly



# CMRR Mission Need

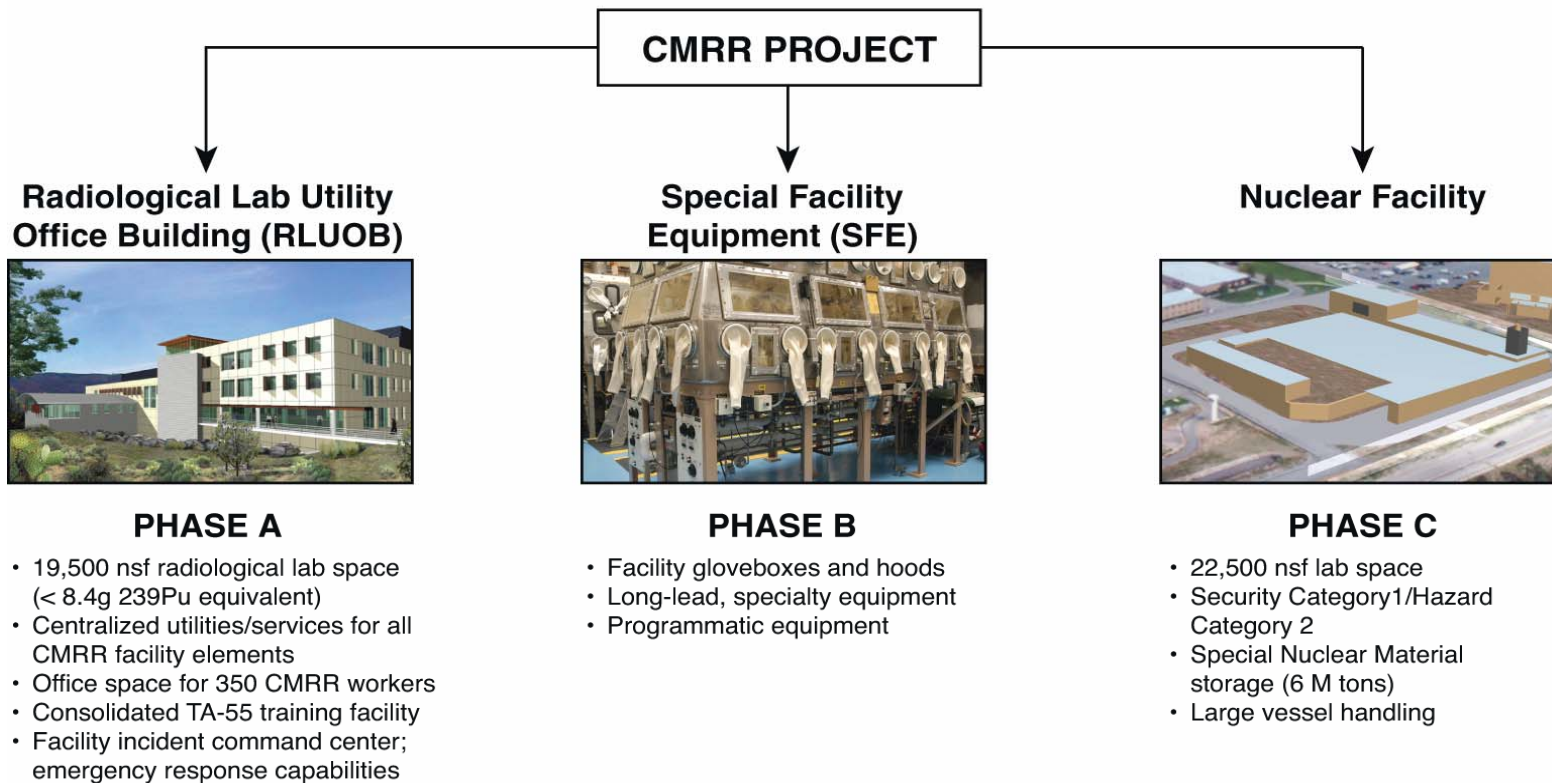
- LANL will have an enduring nuclear mission for the foreseeable future
- Missions require Analytical Chemistry (AC)
- Materials Characterization (MC) and Actinide Research and Development (R&D) support exists at the current CMR Facility but is not available elsewhere
- CMR, built in 1952, has a limited life expectancy -- committed to manage the CMR Facility to planned end of life (2010)
- CMRR will provide the responsive infrastructure necessary to sustain all nuclear programs at LANL, and thus greatly impacts the nuclear weapons complex



***The primary mission of CMRR is to replace mission critical capabilities at CMR that will soon be lost.***

# Overview

**CD-1 TPC: \$745M-\$975M; CD-1 Schedule: 8-12 years**



## PROJECT STATUS

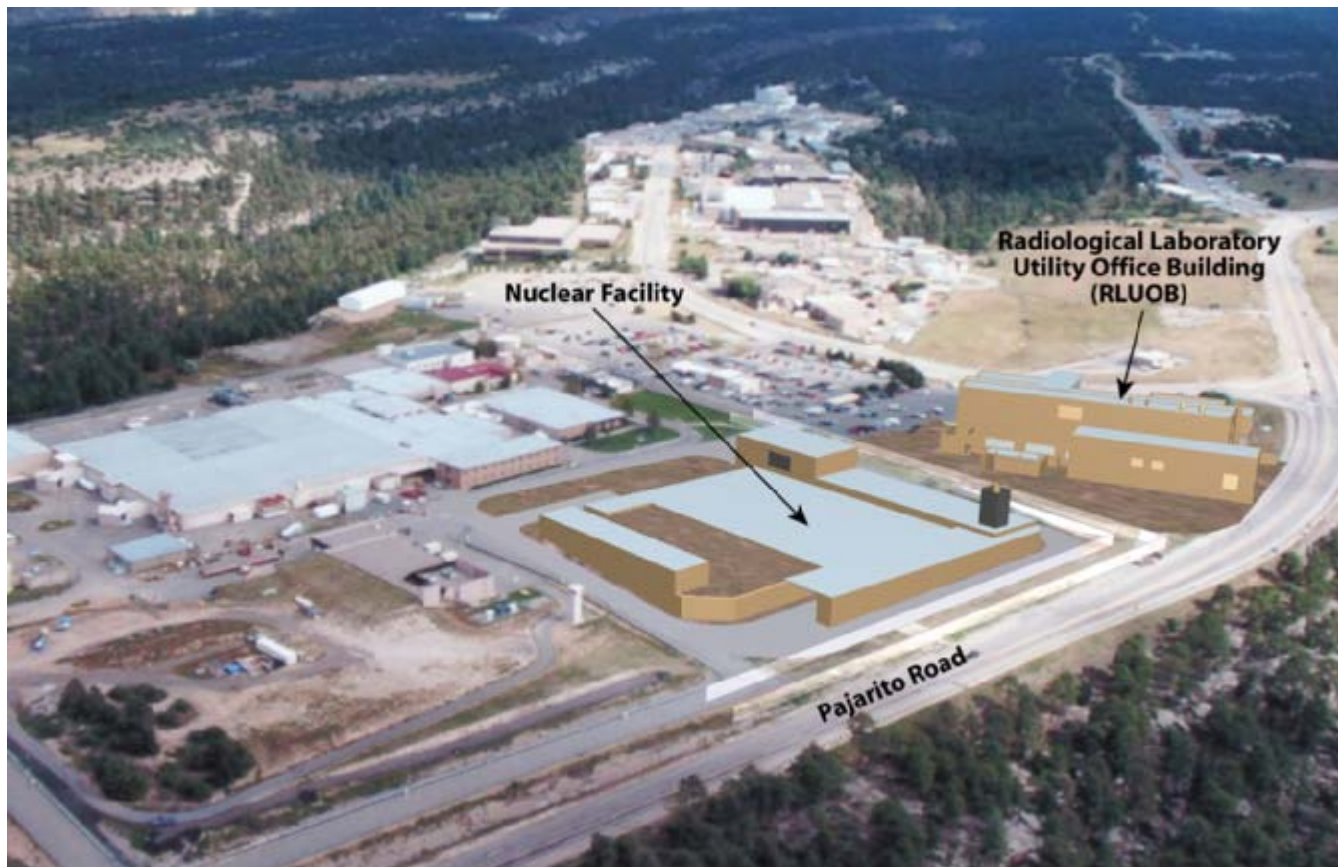
• Final design 36% complete as of 09/13/06.

In preliminary design

Site seismic investigation ongoing

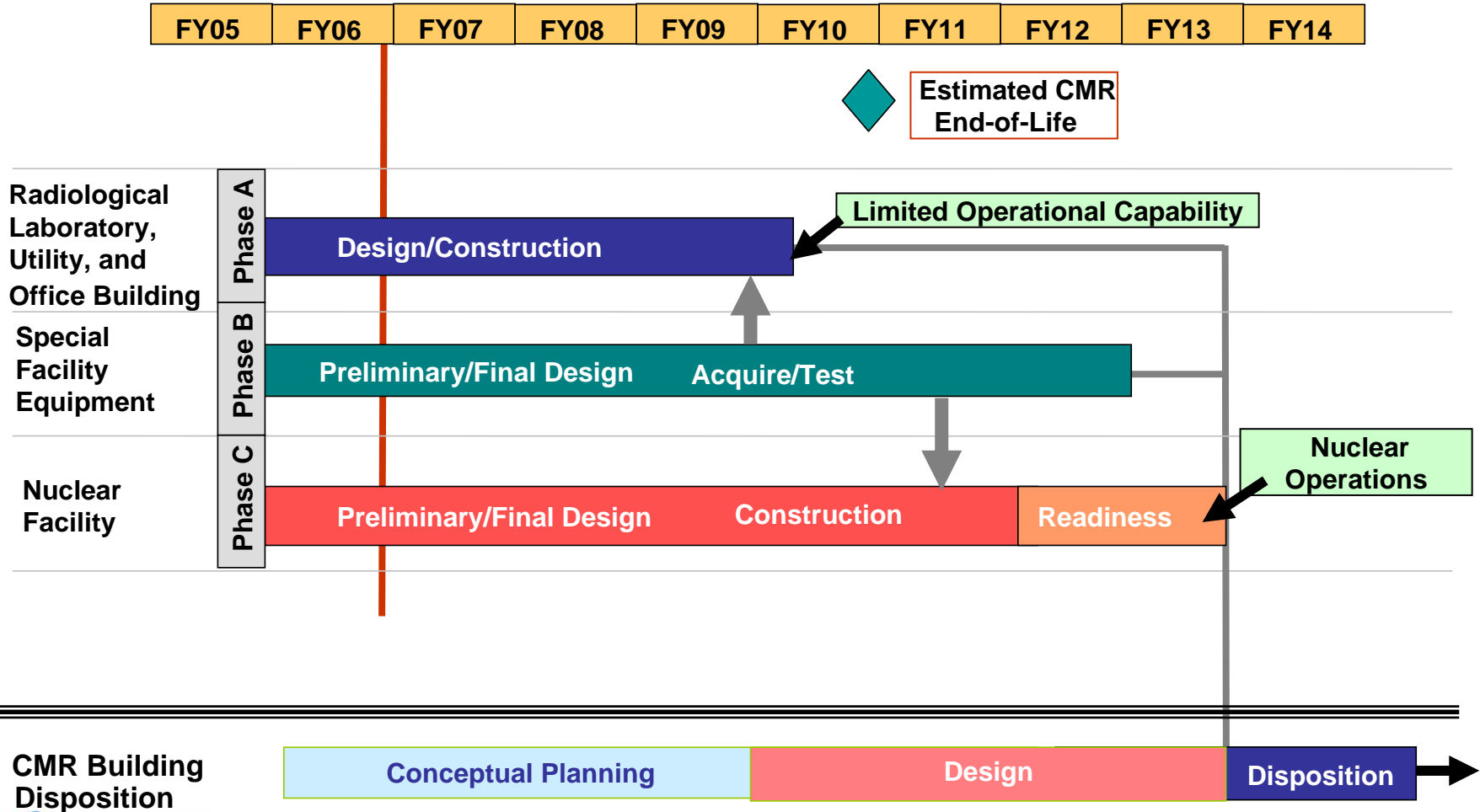


# CMRR Site Drawing



# CMRR Project

## Overall Project Timeline



# CMRR— Project Update

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The following topics will be discussed in more detail:

1. Environment, Safety & Health Update (Steve Fong)
2. Air Permitting (Bill Blankenship)
3. Seismic Investigation (Mike Salmon)

# Phase A – RLUOB ES&H Activities

- Facility Hazard Categorization Completed
  - Radiological/Low Hazard
- Sustainable Design/Pollution Prevention Analysis Underway
  - LEED Silver, US Green Building Council
- Review of NEPA, Cultural and Biological Resources Complete
  - Environmental Impact Statement/Record of Decision
  - Archeological site cleared for construction
  - Spotted owl habitat impacts defined
- Air Quality Permitting Completed
  - Radioactive and non-radioactive air emissions
- Water Quality Permitting Completed
  - No discharges to the environment
  - Storm Water Pollution Prevention Plan approved
- Contractor Construction Safety Plan Approved
- Integrated Work Documents developed to support construction.

All major  
ES&H issues  
have been  
identified and  
resolved.

# LEED Update

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- The LEED (Leadership in Energy and Environmental Design) Green Building Rating System® is a voluntary, independently verified, consensus-based national standard for developing high-performance, sustainable buildings.
- The LEED V2.1 Green Building Rating System for New Construction criteria is being applied.
- The most recent “Sustainability Rating Analysis” found that 29 of the necessary 33 LEED points are achievable through the present design status. An additional 11 possible points require additional design effort. The project is well on its way to achieving the desired Silver Certification.

<http://www.usgbc.org>

# LEED Update

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- The most recent LEED Sustainability Rating Analysis of the RLUOB design indicates:
  - Sustainable Sites (14 points available, 11 achieved, 3 possible)
  - Water Efficiency (5 points available, 4 achieved, 0 possible)
  - Energy and Atmosphere (17 points available, 3 achieved, 1 possible)
  - Materials and Resources (13 points available, 6 achieved, 1 possible)
  - Indoor Environmental Quality (15 points available, 8 achieved, 4 possible)
  - Innovation in Design (5 available points, 1 achieved, 2 possible)

# CMRR Air Permits – Nuclear Facility

Prepare application

Non Rad Application and Permit

Submit application to NMED.  
Initiate public notice.

NMED will provide public notice, allow public participation, and issue a permit

Aug '07

Project Execution

May '06

Nov '06

Nov '06

Mar '07

May '07

Jul '07

Prepare application

Initiate public comment and present at CMRR public meeting

Submit application to EPA

Obtain EPA approval

Rad Application and Approval



# Non-Rad Air Quality Permit Application Update

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- This is an overview of the air permit application which will be submitted to NMED.
- This application covers potential non-radionuclide emissions only.
- The permit application will be reviewed by NMED under the requirements of 20.2.72 NMAC – Construction Permits.
- This will be a modification to New Source Review (NSR) Permit 2195-N issued by NMED for the RLUOB facility.

# What are the air emission sources?

---

- There will be:
  - Natural gas fired boilers which provide hot water for comfort and processes
  - Diesel-fired standby equipment to provide electrical power to the facility should a loss of power occur
  - A process called metallography in which samples containing beryllium are prepared
  - Laboratory scale usage of small amounts of chemicals which are primarily liquids at room temperatures

# What air pollution controls will be used?

---

- Boilers will utilize low-NOx burners which reduce emissions of nitrogen oxides from natural gas combustion.
- Machining of beryllium samples will be conducted with lubricants inside a glove box. Glove box exhaust is filtered by a HEPA filter at the box and followed by a series of three additional HEPA filters.

# What will the environmental impacts be?

---

- Air emissions from the boilers will have minimal impacts.
  - Shown by analysis previously submitted for Permit 2195-N
- It is anticipated there will be no measurable beryllium emission from the sample preparation activities.
  - Same activities are currently conducted at CMR and TA-55 and will be relocated to CMRR
- Any air emission from chemical usage will be below quantities which require regulation under EPA or NMED air quality requirements.
  - Such chemical usage occurs today at CMR and the same type of use is expected at the CMRR when operations are transferred

# Public Notice

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- LANL will post a complete copy of the air permit application on the public site:  
[http://www.airquality.lanl.gov/op\\_permit/construction\\_permits.shtml](http://www.airquality.lanl.gov/op_permit/construction_permits.shtml)
- LANL will provide public notice of the application by newspaper, radio, and direct mail to nearby citizens and governments.
- NMED will provide public notice by newspaper and directly to those who request notification.
- NMED will provide opportunity for public comment and requests for a public hearing during review of the application.

# CMRR Earthquake Investigation

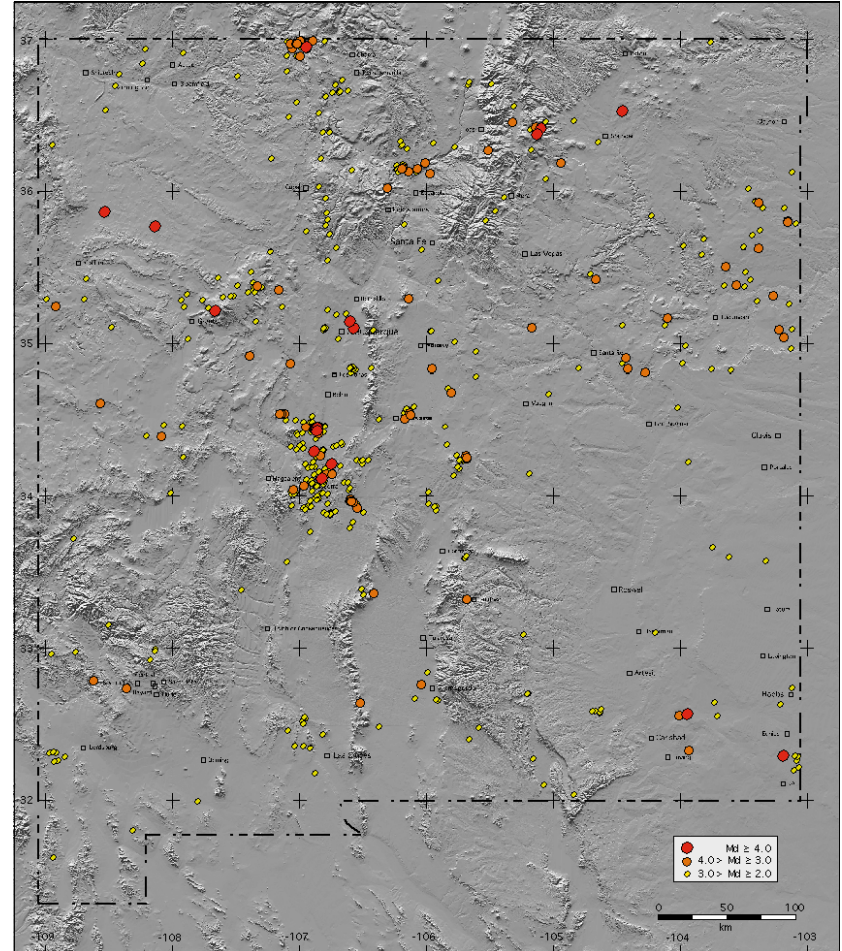
- Why do we need to design for earthquakes in northern New Mexico?
- What are the design requirements?
- How is earthquake hazard information used?
- What has been completed to date?





# Earthquake design in Northern New Mexico?

- Earthquakes are a natural phenomena and occur throughout the USA
- LANL is in the western margin of the Española Basin within the Rio Grande Rift
- The historical earthquake catalog suggests many small magnitude ( $M_L < 3.0$ ) and few larger magnitude ( $M_L > 5.0$ ) events
- LANL complies with state and federal law (2003 International Building Code as adopted by the State of New Mexico and U.S. Department of Energy Orders)
- Structural Engineers analyze buildings and components for expected and rare loads, including the CMRR facilities

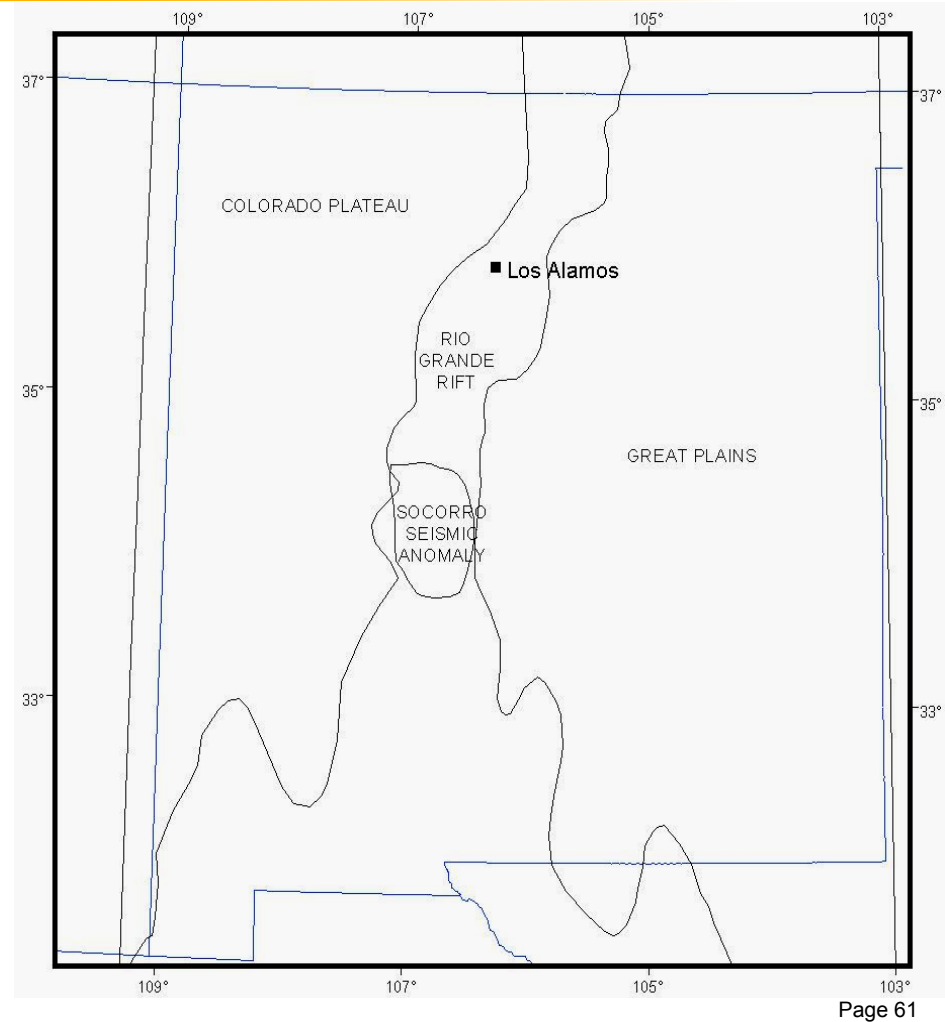


(Sanford, et. al., New Mexico Tech, Open File Report 91) Page 60



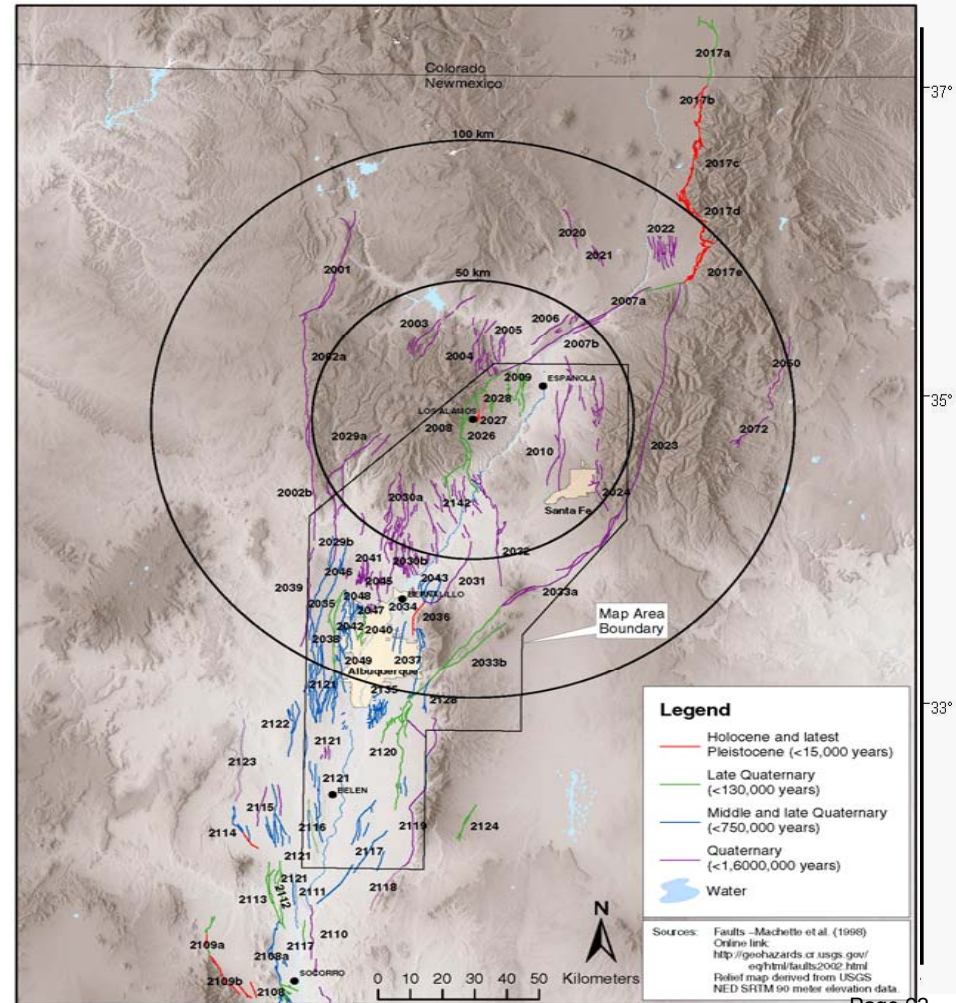
# Earthquake design in Northern New Mexico?

- Earthquake sources are assigned to regions or known faults



# Earthquake design in Northern New Mexico?

- Earthquake sources are assigned to regions or known faults
- There is and has been an aggressive program at LANL to understand the behavior of area sources and faults in the LANL region



# What are the design requirements?

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- New Mexico State Building Code (IBC 2003) requires the definition of a Maximum Considered Earthquake (the most severe earthquake effects considered by the code).
- The Maximum Considered Earthquake in the IBC are derived from USGS National Earthquake Hazard Mapping project, and are 1/2500 year events.
- The U.S. Department of Energy requires extensive site specific seismic hazards assessments to ensure that the design of new nuclear facilities meet objective safety goals. Design is based on 1/2500 year events, and known factors of safety are incorporated into design.
  - Seismic hazard is determined in accordance with DOE rules and involves DNFSB participation and independent oversight.

# PSHA Major Elements

- Elements of Probabilistic Seismic Hazards Assessment (PSHA):
  - Definition of earthquake sources ✓
  - Definition of activity on sources ✓
  - Estimation of local motion given earthquake on some source ✓
  - Definition of ground motion (1/2500 yr acceleration) from all possible sources

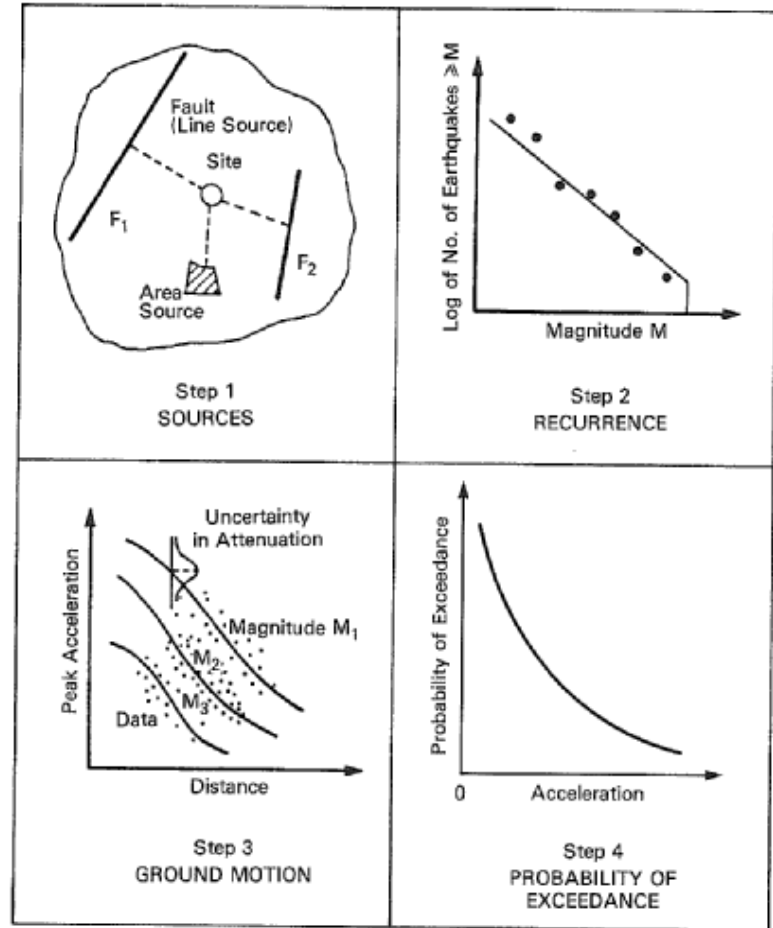


FIGURE 10.2 Basic steps of probabilistic seismic hazard analysis (after TERA Corporation 1978).

# How is earthquake information used at LANL?

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- Site Specific coefficients for use in IBC code equations are defined in LANL Engineering Standards Manual for normal commercial design
- Other information required by structural engineers completing more rigorous analysis of nuclear and other critical facilities is provided

# What has been completed to date?

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- Completion of Significant Geotechnical Work
  - Characterize subsurface, develop geomechanical properties, recommend geotechnical design parameters
  - Multi-Phase – Field Investigations, block sampling, in-situ characterization, laboratory testing
- Preliminary Design Parameters (complete)
  - Design Response Spectra developed
  - Acceleration Time Histories
  - Strain Compatible Soil Properties
- Near Term Scheduled Work supporting CMRR and LANL
  - Excavation
  - Final documentation and reporting of PSHA work



# CMRR Project — Summary

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- CMR is approaching the end of its operational life
- CMR capabilities support core NNSA mission requirements
- CMRR represents responsive infrastructure
  - Supports modernization of a key nuclear capability
  - Increases operational efficiencies, reducing operational costs
  - Enhances security posture and reduced security costs
  - Enhances safety and environmental compliance
- Integration of safety into design is key

*CMRR will be a safe, secure, and modern facility to meet the Nation's requirements.*



# Next Public Meeting

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- Overview of the EPA Region 6 air permit application (radiological)
- General project status

Questions?

# CMR Replacement (CMRR) Project

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## Public Comments and Requests for Topics

## ***V. Flipchart Notes Made During Meeting***

Flip Chart Notes, as written by the Facilitator

Ground Rule:

Say your name before you talk.

Next Meeting: *[possible agenda items]*

- Rad Permit?
- Seismic Investigation Report
- Construction Photos

## ***VI. Sign-In Sheet***



Tuesday, September 19, 2006

CMRR Public Meeting @ Fuller Lodge, Los Alamos - SIGN IN SHEET

NAME (please print)	ADDRESS	TELEPHONE NUMBER	E-MAIL	WOULD YOU LIKE TO SPEAK?
Tom Nelson	242 Garver Los Alamos, NM	-	ton@lanl.gov	✓
Stephen Fey	528 35th St. LA, NM	-	stfey@doe.lanl.gov	-
Bill Blankenship	ENV-2AR	665-0323	BBlankenship@lanl.gov	-
Morrison Bennett	CAS D-416	667-3916	mbennett@lanl.gov	-
Tommy Ladin	LANL	665-4965	-	-
LORQUE BONDS LOPEZ	LANL	667-0216	loruel@lanl.gov	NO
Ed Moreno	7 Cochran St SFE 87508	466-2006	edmoreno@newmexico.com	no
Bryan Kohn	802 Kistler Ln Los Alamos	662-2390	bkk@lanl.gov	no
CRAIG BACHMEIER	10 CIRCLE LOMA SANTA FE	471-2656	craigb@lanl.gov	NO
MIKE SALMON	1485 44th ST LOS ALAMOS, NM 87544	665-7244	salmon@lanl.gov	NO



Tuesday, September 19, 2006

CMRR Public Meeting @ Fuller Lodge, Los Alamos – SIGN IN SHEET

NAME (please print)	ADDRESS	TELEPHONE NUMBER	E-MAIL	WOULD YOU LIKE TO SPEAK?
Everett Trullinger	14 Dulce Rd SANTA FE	#667-0281	etrullinger@doeal.gov	—
Jackie Hurie	484 Louise Ave White Rock NM	672-0844	—	NO
Glenn Banks	484 Louise Ave White Rock NM	672-0844	—	NO
DAVID L. WEATHERS	825 46TH STREET L.A. NM	662-0643		NO
DIANNE WILBURN	1042 ORO CT LOS ALAMOS NM	662-6102	dwwilburn@lanl.gov	NO
Diane Wilburn	1042 ORO CT L.A.	↓	↓	NO
DAVE FUEHNE	1300 Sabe Loop LOS ALAMOS	662-3889	davef@lanl.gov	NO
Phil Wardwell	Santa Fe	665-5557	wardwell@lanl.gov	NO
MYRON KOOP	505 OPPENHEIMER #108	577-7243		NO
Ray Crawford	ll	#	crcrawford@lanl.gov	NO





Tuesday, September 19, 2006

CMRR Public Meeting @ Fuller Lodge, Los Alamos – SIGN IN SHEET

NAME (please print)	ADDRESS	TELEPHONE NUMBER	E-MAIL	WOULD YOU LIKE TO SPEAK?
Jonathan Ventura	5600 Quetzal	6060170		No
Debra Hume	LAWL	7-4371	dhume@lanl.gov	nope.