nuclear watch new mexico

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Nuclear Watch New Mexico (NWNM) respectfully submits these comments on the needed scope of the *Supplemental Environmental Impact Statement for the Nuclear Facility Portion of the Chemistry and Metallurgy Research Building Replacement Project at Los Alamos National Laboratory (LANL), Los Alamos, New Mexico* (hereinafter "CMRR-NF SEIS"). We would appreciate their serious consideration by the National Nuclear Security Administration (NNSA) and look forward to the agency's comprehensive response.

Through comprehensive research, public education and effective citizen action, **Nuclear Watch New Mexico** seeks to promote safety and environmental protection at regional nuclear facilities; mission diversification away from nuclear weapons programs; greater accountability and cleanup in the nation-wide nuclear weapons complex; and consistent U.S. leadership toward a world free of nuclear weapons.

We work on current budget, environmental and policy issues concerning nuclear weapons facilities, primarily the Los Alamos National Laboratory (LANL). We have publicly and vocally pressed the Lab to diversify its missions away from nuclear weapons programs and move more toward critically needed programs, such as nonproliferation efforts, other new national security priorities (for example, port security), and pure science and energy efficiency programs. Through detailed budget analyses, we hope to demonstrate that LANL can move towards these real national security issues and still contribute to the economy of northern New Mexico.

We appreciate public involvement in the NEPA process. We also support safe, monitored storage of radioactive wastes as a matter of national security and environmental protection. However, this should not be interpreted as support for more nuclear weapons, plutonium pit production, nuclear power, or the generation of more nuclear wastes. In our view, the best way to deal with the environmental impacts of nuclear waste is to not produce it to begin with.

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General Comments

An unconscionable amount of taxpayer money is typically expended anytime DOE nuclear facilities are built. The expense associated with controlling radioactive and fissile materials is astronomical. Please analyze the impacts of diverting these funds away from renewable energy and nonproliferation programs at the Los Alamos National Laboratory (LANL) for a new facility to directly support production of plutonium pits or "triggers" for nuclear weapons, called the Chemistry and Metallurgy Research Replacement (CMRR) Project, and specifically the Nuclear Facility (NF).

- Please analyze the impacts of diverting taxpayer dollars to new nuclear weapons facilities instead of cleaning up the massive environmental damage caused by past research and production.
- What are the long-term public health and ecological effects of leaving radioactive and chemical contaminants that can pollute precious water resources, while new, unnecessary, and costly nuclear facilities are being built?
- Analyze the likely negative effect on the global nonproliferation regime that the U.S. would set with expanded bomb production.

Request for a 120-Day Comment Period for the Draft on the CMRR-NF SEIS

The scope of the CMRR-NF has grown dramatically, with a ~50% increase in footprint size and a ~7-fold increase in projected costs since NNSA's original estimates. As currently scheduled, the CMRR-NF will not be completed any earlier than FY 2020. In addition to increased scale and lengthened schedule the Project has seriously grown in complexity, with, for example, added related subprojects such as a concrete batch plant and 225,000 $yd.^3$ of a concrete base mat to mitigate seismic concerns. There are also more comprehensive data pointing to increased potential seismic risks. Given all this, we think the planned 45-day period to comment on the draft CMRR-NF SEIS is insufficient. We request a 120-day comment period instead.

We do thank NNSA for having extended the scoping comment period from 30 days to 45.

Draft SEIS Hearings Must Be Held in Los Alamos/White Rock, Espanola, Taos, Santa Fe, and Albuquerque.

NNSA held two scoping meetings, one in White Rock and one in Pojoaque, which had decent public turnout (especially the one in Pojoaque). In our experience the level of public interest in NNSA issues is always far higher once a draft document is produced. We argue that hearings on the draft SEIS must be held in other impacted communities or communities that express public interest. We suggest that NNSA conduct hearings on the draft SEIS in Los Alamos/White Rock, Espanola, Taos, Santa Fe, and Albuquerque during evening hours so that working people can attend.

In addition to presentations made by NNSA, these hearings on the draft SEIS should be formal in the sense that they provide interested citizens the opportunity to make verbal comments that all attendees can hear. Moreover, those verbal comments should be transcribed for recordation into the SEIS record.

All cited reference documents for the draft SEIS should be made available on the Internet simultaneous with its release. As in past practice, NNSA should announce in regional newspapers scheduled hearings for the draft SEIS, but also the availability of the draft SEIS on the Internet, by CD and/or hard copy, as requested by the interested citizen. We further recommend that NNSA mail postcards to citizens known to be interested (for example those that signed up at the scoping meetings) notifying them of the availability of the draft SEIS in different media.

The CMRR-NF SEIS Must Be Completely Free of Predetermination

This process must be completely unprejudiced by the fact that the RULOB facility (or "Rad Lab") has been built, that hundreds of millions of dollars have been spent on NF design, and that the 2003 CMRR EIS, 2008 LANL Site-Wide EIS, the Complex Transformation Supplemental Programmatic EIS and the April 2010 Nuclear Posture Review have all endorsed construction of the Nuclear Facility.

We applaud NNSA's decision to undertake a supplemental environmental impact statement (SEIS) for the CMRR-NF. But clearly this is an "unusual" SEIS given that CMRR's phase one, the Rad Lab, has already been built, and further that hundreds of millions of dollars have already been spent on NF design. The first thing that the NNSA must do in the draft SEIS is to concretely demonstrate this is an impartial and not predetermined process which ultimately leads to an objective decision to build the NF or not. Better yet would be a completely new environmental impact statement, rather than a mere "supplement."

Whether "supplement" or "new," this review should be a straight up or down evaluation of the merits or demerits of the project. But it should also be informed by the contemporary high-level review ordered by DOE Secretary Chu. He has directed that a panel be formed of specialists with "no stake in the outcome" to analyze the fundamental necessity for both the CMRR-NF and the Uranium Processing Facility at the Y-12 Plant. The panel's conclusions are due for release in January 2011.

Clearly, NNSA must request no funding for construction of the NF in its FY 2012 Congressional Budget Request until after a Record of Decision is issued for this SEIS. This is in contrast to language in NNSA's FY 2011 request, which states, "The President's Request includes funding to complete the design and begin construction of the Chemistry and Metallurgy Research Facility Replacement nuclear facility at the Los Alamos National Laboratory. (NNSA FY 2011 Congressional Budget Request, p. 11.)

We urge NNSA to refrain from requesting funding for construction of the Nuclear Facility in its FY 2012 Congressional Budget Request, an issue that should be addressed in the draft SEIS.

We are concerned that there is ample evidence of predetermination. For example, Brigadier General Garrett Harencak, NNSA Principal Assistant Deputy Administrator for Military Applications, Office of Defense Programs, when "Asked if CMRR (at Los Alamos) and UPF (at Y-12) would continue on parallel tracks, he said, "Yeah, absolutely. We're committed, the administration is committed, the NNSA is absolutely 100 percent. We're committed to build at two sites. The NPR has said and come out and told us and the administration has told us we're going to complete the design, we're going to get into construction and complete it by 2020 and get to work in these buildings by 2022. We are 100 percent committed to both."
http://blogs.knoxnews.com/munger/2010/11/harencak_mum_on_nnsa_funding_p.html

That sure sounds like predetermination.

There should be no funding for an expanded security perimeter to accommodate the Nuclear Facility until a Record of Decision (ROD) is issued for the CMRR SEIS. Similarly, all procurement activities for the NF must cease until the ROD is issued, which the draft SEIS should make explicitly clear.

To continue funding the design of the NF itself gives the appearance of predetermination. Final design is scheduled to begin this FY 2011. There certainly has to be enough information now to complete this SEIS competently, given that probably ~$200 million has already been spent on NF design. We contend that the NF, as currently designed, is not a generic design that can be built anywhere, as it would be over-designed to address seismic issues for some possible other locations. Please discuss other possible locations that the NF, as designed, could be located. If design continues, please state how much of the current cost estimate is to address seismic concerns at TA-55. Please explain the rationale for continuing to design the NF while this SEIS is in progress.

If the decision to locate the Nuclear Facility at LANL was based on cost, this is a decision that must be revisited, given the ~$4.5 billion dollar price tag.

Please explain why this SEIS should continue before the Secretary decides whether the NF is needed or not. Please explain how the capabilities that NNSA claims it needs will be matched those provided by the proposed NF. Please explain how past justifications for the NF will not prejudice the outcome of this SEIS.

Purpose And Need Must Be Thoroughly Addressed

NNSA must justify why a ~$4.5 billion new NF is needed. We maintain that the NF has always been about directly supporting expanded pit production. For a current example, see NNSA's FY11 Stockpile Stewardship and Management Plan (SSMP):

> **Existing Los Alamos plutonium facilities** are not sustainable and **do not provide an inherent manufacturing capacity sufficient for the range of possible future scenarios…**
> Path Forward…
> • Complete the design and begin construction of the Chemistry and Metallurgy Research Replacement **Nuclear Facility** at Los Alamos (a facility that conducts plutonium research and development and provides analytical chemistry and materials characterization to all plutonium programs such as surveillance, manufacturing, and plutonium disposition.) Plan and program to complete construction no later than 2020, and **ramp up to full operations in 2022**.
> • **Increase pit processing capacity and capability at the adjoining PF-4** (part of the main plutonium facility) at Los Alamos to demonstrate pit reuse by 2017 and manufacturing by 2018-2020. **Plan and program to ramp up to a manufacturing capability of up to 80 pits per year in 2022.** Complete required investment in PF-4 infrastructure and waste processing capabilities in time to support expected plutonium capability in 2022. (NNSA FY11 SSMP, p. 23-24, http://www.nukewatch.org/importantdocs/resources/Stockpile_Stewardship_and_Management_Plan_2010.pdf Parenthesis in the original, bolded emphasis added.)

Concerning whether LANL's plutonium facilities are sustainable, we agree that the old CMR Building is not, at least for operations with Hazard Category 2 special nuclear materials (SNM). However, not only is PF-4 clearly sustainable, but in fact has already been retrofitted with additional glovebox lines and equipment to achieve expanded production capability of up to 80 plutonium pits per year, as evidenced by the following:

> **LANL 08 Performance Evaluation Report**
> **Pit Manufacturing Equipment**
> **Measure 1.13 Build Six New W88 Pits & Install Equipment in FY 2008 to increase Pit Capacity to 80 Pits per Year by the Operational Date of a CMRR-Nuclear Facility (Incentive/Base)**
> **Expectation Statement:**
> Build six new W88 pits and install equipment in FY 2008 to increase pit capacity to 80 pits per year by the operational date of a CMRR-Nuclear facility.
> **Completion Assessment:**
> LANS [Los Alamos National Security, LLC] has submitted completion evidence for award of full fee. NNSA has validated appropriate and timely completion.
> http://www.doeal.gov/laso/GeneralDocs/FY%202008%20Performance%20Evaluation%20Report%20Final.pdf

All that is lacking for the desired "range of possible future scenarios," that is "to ramp up to a manufacturing capability of up to 80 pits per year in 2022," are the expanded SNM materials characterization and analytical chemistry capabilities needed to directly support expanded pit production. This is where the CMRR NF comes in. But while various high-level documents have blessed construction and operation of the CMRR NF, none have approved expanded plutonium pit production. The 1999 LANL Site-Wide Environmental Impact Statement set that level at 20 pits per year. Since that time, in one form or another, the Modern Pit Facility EIS, the Complex 2030 Programmatic EIS, the 2008 LANL Site-

Wide EIS, and the Complex Transformation Supplemental PEIS have all set out to formally expand plutonium pit production. They all failed to do so.

For there to be truly impartial NEPA review without predetermination there must be analysis of the fundamental need of the NF given that: 1) there has been no decision to expand beyond the currently approved production rate of 20 pits per year; and 2) there is no foreseeable decision to do so anytime soon. In effect, NNSA has predetermined that there will be expanded plutonium pit production (see SSMP above), which in turn predetermines that the NF is necessary. No predetermination! The draft SEIS should specifically examine whether there will ever be a formal decision to expand pit production, and therefore the need for the Nuclear Facility in the absence of such a decision.

The Proposed Alternatives Must Be Clarified And Added To

In its October 1, 2010 Federal Register Notice of Intent NNSA proposed three alternatives for the CMRR-NF SEIS:

> **No Action Alternative:** The No Action alternative would be the construction of the CMRR-NF and the ancillary and support activities as announced in the 2004 [CMRR] ROD [Record of Decision].
>
> **CMR Alternative 1:** Do not construct a replacement facility to house the capabilities planned for the CMRR-NF. Continue to perform analytical chemistry, material characterization, and actinide research and development activities in the CMR Building, with no facility upgrades, while performing routine maintenance at the level needed to sustain programmatic operations for as long as feasible.
>
> **CMR Alternative 2:** Same as CMR Alternative 1 but includes making the extensive facility upgrades needed to sustain CMR programmatic operations for another 20 to 30 years.

No Action Alternative - All Construction and Programmatic Impacts Must Be Reexamined Although construction of the CMRR-NF is now called the "No Action Alternative," all the construction and programmatic environmental impacts of this proposed facility must be reexamined. Very few, if any, of the construction impacts from the 2003 still apply. From 2003 CMRR EIS, p. S-27:

> The new building(s) proposed for the CMRR Facility are in the conceptual design stage and, as a result, are not described in great detail in the *CMRR EIS*.

In effect, all parameters of the NF have changed, because the facility analyzed in the 2003 EIS was "in the conceptual design stage" and now it is designed, so all aspects of the NF must now be reanalyzed in this SEIS.

Because the current design of the NF is so mature, analyzing the exact impacts of construction is now possible. The quantities and impacts of all materials to be used and removed in the proposed construction must be stated. For example:

- The total cubic yards of concrete must be stated
- The total amount of steel must be stated
- The amount of dirt to be removed and the plans for its disposition must be stated

- How have seismic issues been incorporated into the design?

Please describe in detail the "ancillary and support activities" that are included in this alternative. The environmental impacts of these "ancillary and support activities" must be analyzed.

The programmatic impacts must also be reexamined. List all the proposed activities and analyze their impacts separately. Please state how many plutonium pits will be built each year. What is the total number of analytical chemistry samples that the proposed NF will be capable of analyzing annually? What is the total number of materials characterization samples that the proposed NF will be capable of analyzing annually?

What is the mission contingency space currently planned for the NF?

From the 2003 CMRR FEIS Pg. 2-6

> **2.4.1 AC and MC Capabilities**
> These capabilities include the facility space and equipment needed to support nuclear operations... Most of these capabilities are found at the CMR Building, although a subset of AC and MC capabilities reside in the TA-55 Plutonium Facility and other locations at LANL.

Please describe AC/MC capabilities at TA-55, CMR, and please name the other sites and the capabilities. Please describe the calculations that arrived at the required square footage for the NF.

CMR Alternative 1 – A Questionable Alternative

Please define "feasible." A more refined timeframe must be stated. The current status of the CMR should be better described. How many wings are closed? What is the proposed square footage of the CMR that will be used under this alternative? What is the proposed square footage of the CMR that will be used to support what would otherwise be NF operations? Will current risk reduction activities continue under this alternative? If not, the impacts of not continuing these activities must be analyzed. Will the Lab still allow deferred maintenance to grow at the CMR under this alternative (as mentioned in NNSA/Readiness in Technical Base and Facilities, FY 2011 Congressional Budget Pg. 160)?

Please describe in detail what CMR missions the 200,000 square feet Rad Lab can absorb. Any continued use of the old CMR Building must be explained and analyzed.

CMR Alternative 2 – A Capability Study is Required

Because continuing use of CMR is proposed, a capabilities study is needed for all programs using the CMR and PF-4. For each program, please calculate floor space required, projected life of program, and cost for upgrades.

Should the old CMR Building remain in use for nuclear operations then installation of new stand-alone safes for Special Nuclear Materials (SNM) should be considered.

Defense Nuclear Facilities Safety Board (DNFSB) "Los Alamos Report for Week Ending October 1, 2010:"

> Plutonium Facility – Fire Protection: Six fire-rated safes have been installed in the Plutonium Facility basement. These safes have been qualified to survive bounding Plutonium Facility accident scenarios and have been credited with a damage ratio of zero, meaning that material contained in these safes do not contribute to accident source terms.

Using safes such as these in the old CMR Building to mitigate safety and security concerns should be analyzed as an option. Better yet, removing special nuclear materials (SNM) from the old CMR Building and maintaining it as a Hazard Category 3 facility instead of a Hazard Category 2 facility must be considered. This would make CMR seismic upgrades less burdensome and expensive.

The current status of the CMR should be declared. How many wings are currently closed? What is the proposed square footage of the CMR that will be used under any alternative? Will current risk reduction activities continue under this alternative? Will the Lab still allow deferred maintenance to grow at the CMR (as mentioned in NNSA/Readiness in Technical Base and Facilities, FY 2011 Congressional Budget, p. 160)?

All the proposed "extensive facility upgrades" must be listed and the impacts of these upgrades must be analyzed. The CMR Hazard Reduction activities must be listed and the impacts of these activities must be analyzed (see NNSA/ Readiness in Technical Base and Facilities, FY 2011 Congressional Budget Pg. 161). The CMR Risk Mitigation and Consolidation activities must be listed and the impacts of these activities must be analyzed.

The 2004 CMRR Record of Decision states "However, the actual implementation of these decisions is dependent on DOE funding levels and allocations of the DOE budget across competing priorities." Please analyze the impacts of insufficient funding on each of the three proposed alternatives.

Please analyze the impacts of all current and proposed projects to extend the life of the CMR, including roofing work, exhaust fans, HEPA filters, structural and safety systems, and elevator repairs. Please list the history of investments made to date into the CMR. Please declare what Hazard Category is planned for future use of the CMR.

Cost is a factor in these decisions. From the 2003 CMRR Final EIS Pg. S-20:

> ***S.2.2 Alternatives Considered but Not Analyzed in Detail Extensive Major Upgrade to the Existing CMR Building for Use Beyond 2010:*** The proposal to complete upgrades to the existing CMR Building's structural and safety systems necessary to meet current mission support requirements for the suite of capabilities that exist in the building today for another 20 to 30 years of operations was considered and evaluated by DOE and UC at LANL in the 1998 to 1999 timeframe. This approach to maintaining these mission critical nuclear support capabilities would require a capital investment in excess of several

hundred million dollars for just two of the eight CMR Building's wings. The costs of upgrading the entire structure would equal or exceed construction costs for the proposed CMRR Facility.

Now it is time to analyze this option in detail. The current estimate for the NF is now ~$4 billion. Would this cost more than upgrading the CMR? What is the cost of upgrading just two wings of the CMR? What is the cost of upgrading the entire CMR?

A capabilities study of LANL's plutonium infrastructure is required. Some programs currently performed in PF-4 are scheduled to last for only a few more years. The ARIES and the MOX programs, for instance, are due to be completed by 2015, thus freeing up some floor space. Given that plutonium pit production is not being expanded (nor is likely to be expanded), again there should be rigorous review of whether the Nuclear Facility is truly needed and analysis of the feasibility of relocating old CMR missions to PF-4 and the Rad Lab while not building the Nuclear Facility. An update is needed to ***Alternatives For Increasing The Nuclear Materials Processing Space At Los Alamos For Future Missions*** **(**Drew E. Kornreich & Nelson S. DeMuth, April 25, 1997). Please update the tables that show the floor space requirements for each program and what facility could be used for which program and operation.

Please update that study. The CMRR-NF SEIS should include an update of the table from that report that follows:

Table 1. Category 1 Laboratory Space Requirements.

	Present PF-4	Future PF-4	Future CMR	Change
DP-Programs				
Pit Fabrication - General	11,400	11,500	2,200	2,300
Pit Fabrication - Disassembly	0	0	1,000	1,000
Pit Fabrication - Assembly	0	3,100	0	3,100
Pit Fabrication - Radiography	0	700	0	700
Pit Surveillance	2,300	0	4,500	2,200
Pu-238 Heat Sources & Recovery	6,000	6,000	0	0
Stockpile Stewardship Programs	2,300	2,300	0	0
Special Recovery Line	700	0	1,200	500
Actinide Research & Development	3,400	3,400	1,000	1,000
Non-DP Programs				
Pu-238 Heat Sources & Recovery	3,000	3,000	0	0
Neutron Source Mat'ls Recovery	800	800	0	0
Fissile Materials Disposition - ARIES	1,000	1,500	0	500
Fissile Materials Disposition - MOX	3,000	3,000	0	0
EM Technology Support	800	0	0	–800
Non-Proliferation Technologies	0	0	0	0
Support Functions				
Aqueous and Pyro Recovery	13,400	13,400	0	0
Mat'ls Management and Rad. Control	4,400	4,400	2,000	2,000
Waste Management	2,400	2,400	1,200	1,200
Analytical Chemistry - Metallography	4,700	2,600	1,500	–600
Contingency Space	0	1,500	700	2,200
Totals	59,600	59,600	15,300	15,300

For convenience's sake, here we provide NNSA with a blank ready-to-fill-in table"

Category 1 Laboratory Space Requirements.

	Present PF-4	Future PF-4 W/o Vault	Present CMR	Future CMR w/o Vault	Future RULOB	Future PF-4 With Vault	Future CMR With Vault
DP-Programs							
Pit Fabrication - General							
Pit Fabrication - Disassembly							
Pit Fabrication - Assembly							
Pit Fabrication - Radiography							
Pit Surveillance							
Pu-238 Heat Sources & Recovery							
Stockpile Stewardship Programs							
Special Recovery Line							

Actinide Research & Development

Non-DP Programs

Pu-238 Heat Sources & Recovery

Neutron Source Mat'ls Recovery

Fissile Materials Disposition - ARIES

Fissile Materials Disposition - MOX

EM Technology Support

Non-Proliferation Technologies

Support Functions

Aqueous and Pyro Recovery

Mat'ls Management and Rad. Control

Waste Management

Analytical Chemistry - Metallography

Contingency Space

Totals

Additional Alternatives Must Be Analyzed

We suggest the following alternatives for consideration in addition to NNSA's three stated alternatives.

Alternative #4

- Do not build the Nuclear Facility.
- Decontaminate and demolish the old CMR Building.
- Consolidate CMR missions in the Rad Lab and PF-4.

We argue that this is the appropriate alternative for NNSA to follow.

Alternative #5

- Do not build the Nuclear Facility.
- Decontaminate and demolish the old CMR Building.
- Consolidate CMR missions in the Rad Lab and PF-4.
- Build an SNM vault at TA-55.
    - This vault would free up floor space at PF-4 and CMR.
    - This vault would help de-inventory CMR and PF-4.
    - It will provide for enhanced safe and secure storage of special nuclear materials.
    - NNSA's claimed need fro the Nuclear Facility should be de-linked from any possible need for a new SNM vault.

Alternative #6

- Do not build the Nuclear Facility.
- Continue to perform analytical chemistry, material characterization, and actinide research and development activities in the CMR Building, but making extensive facility upgrades needed to sustain CMR programmatic operations for another 20 to 30 years.

- All the proposed "extensive facility upgrades" must be listed and the impacts of these upgrades must be analyzed.
- The CMR Hazard Reduction activities (as mentioned in the NNSA/ Readiness in Technical Base and Facilities, FY 2011 Congressional Budget, p. 161) must be listed and the impacts of these activities must be analyzed.
- The CMR Risk Mitigation and Consolidation activities (as mentioned in the NNSA/ Readiness in Technical Base and Facilities, FY 2011 Congressional Budget, p. 160) must be listed and their impacts analyzed.
- Analyze the impacts of all current and proposed projects to extend the life of the CMR, including roofing work, exhaust fans, HEPA filters, structural and safety systems, and elevator repairs.

- Build an SNM vault at TA-55.
- Further consolidate operations into existing facilities, particularly the new 200,000 square feet Rad Lab and PF-4.

An Independent Analysis of the Duration of Construction Is Required
Should the construction take longer than estimated, impacts will be greater than estimated.

How Does Management Of A Very Large Construction Project Fit Into LANL's Mission?
Where in LANL's mission statement does it state that LANL is to be a major construction management company? The effort required to build a ~$4.5 billion facility can only be a distraction to the work that LANL and only LANL can do. Does the shear size of the project demand so much time from DOE and LANL management that the smaller scientific efforts get squashed? Has the shear size of the effort drawn resources from essential programs?

IS NNSA the Correct Federal Entity to Oversee Management of NF Construction? NNSA's track record certainly suggests that it is not. See, for example, the construction history of the National Ignition Facility at the Lawrence Livermore National Laboratory. The SEIS should examine alternatives to construction management by NNSA. At a cost of over $12,500 per square foot for the delivered NF something is obviously terribly wrong.

Proposed Changes To Be Analyzed Must Include Greater Scope
The NOI states, "The potential environmental impacts of these and similar changes will be analyzed in the CMRR-NF SEIS," as follows:

> Changes to the CMRR-NF structure required for seismic safety
> Changes to the infrastructure to support the CMRR-NF construction activities

> Changes to the CMRR-NF structure to ensure 10 CFR Part 830 nuclear safety basis requirements
> Changes to incorporate additional sustainable design principles and environmental conservation measures

But the 2003 CMRR EIS, p. S-27 states, "The new building(s) proposed for the CMRR Facility are in the conceptual design stage and, as a result, are not described in great detail in the *CMRR EIS*." In effect, all parameters of the NF have changed, because the facility analyzed in the 2003 EIS was "in the conceptual design stage." Now that the NF is entering into final design, all aspects of the NF must be reanalyzed in this SEIS.

> When originally conceptualized, the replacement facilities for CMR, the RLUOB and NF, were thought to result in a significantly smaller space than the CMR facilities being replaced. However, owing to needs to meet modern health, waste, safety, and security functions, the combined space for CMRR is now expected to exceed the space for CMR. (Weapons Activities/RTBF/Construction/ 04-D-125, CMR Building Replacement Project, LANL, FY 2011 Congressional Budget, Pg. 228)

Please explain these health, waste, safety, and security changes in detail.

SEIS Scoping Meeting Comments

In the poster "CMRR Nuclear Facility (cross section looking east)," LA-UR-10-06991, anchors and tiebacks are shown.

- What are the effects of these anchors on the geology?
- How long are they?
- Will they provide pathways for contaminants?
- Will they provide pathways for contaminants to the regional aquifer?
- Will installing them further fracture the tuff?

The Costs of Trying to Build a Plutonium Pit Factory in a Geologically Unstable Area Are Just Too High

LANL is located between the Rio Grande rift valley and an extinct volcano (the Jemez Mountains) in a seismic fault zone (the Pajarito Plateau). An updated seismic hazards analysis was published in May 2007. It showed a potential huge increase in seismic ground motion and activity. In all likelihood, most of the over $3 billion in cost estimate increases since 2008 are due to efforts to address these increased seismic hazards. DOE must analyze whether $3 billion is too high of a cost to build a new NF at LANL.

To address these increased seismic hazards, DOE now plans to excavate 225,000 cubic yards of earth under the proposed NF and fill the hole with concrete. DOE must address the following questions: Is surrounding geology strong enough to support all that concrete? How much will the NF and all that concrete weigh? Has construction of a facility ever been done before on such an enormous concrete slab? If so, what were the results? Will a seismic event cause it to sink or shift? What are the environmental

impacts? This SEIS is analyzing the effects of this action, but it must also examine plans and to remove it and the positive or negative impacts thereof.

Seismic Hazards must continue to be studied and addressed

Steep topography on the Pajarito fault made field measurements difficult and the Rendija Canyon and Guaje Mountain faults have not been fully characterized.

- Rendija and Guaje faults must be mapped.
- The inferred fault at TA-3 must be mapped.
    - Where's the trench across the inferred fault at CMR?

WM03 Conference, February 23-27, 2003, Tucson, AZ

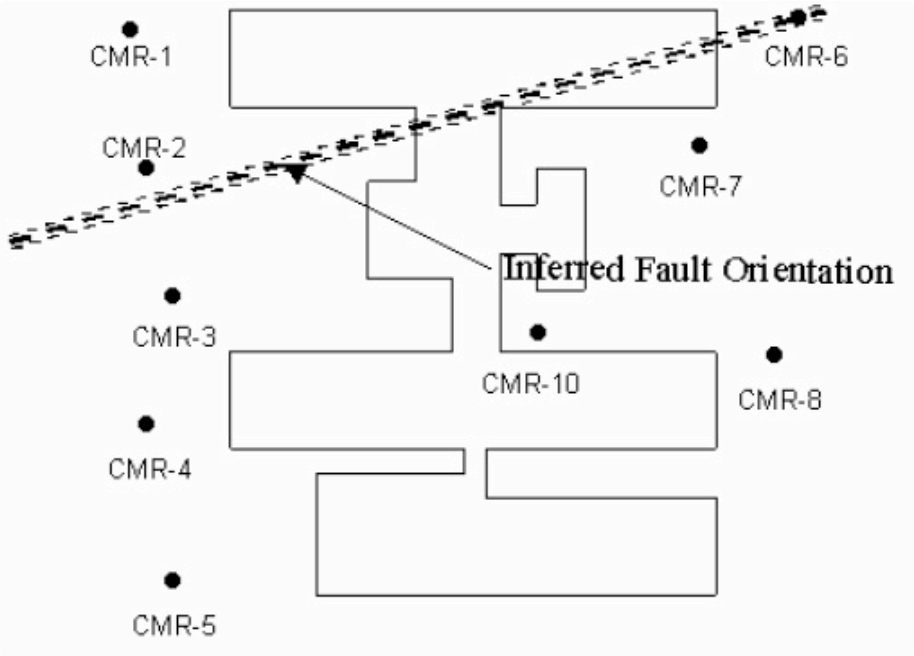

Figure 1. CMR Facility with inferred location of fault.

Please Explain why LANL Is Still the Best Site for the NF

The 2003 CMRR EIS was completed before the 2007 Probabilistic Seismic Hazard Analysis. One of the main requirements of DOE O 420.1b is to choose an appropriate site. It is not now clear that LANL is the appropriate site for the NF. Because of this, design overly relies on the other requirements for defense in depth. Describe, in detail, how the design of the NF addresses the list of defense in depth requirements and the environmental impacts of these requirements.

DOE O 420.1B Attachment 2, 12-22-05 Pg. I-2

3. REQUIREMENTS.

b. Nuclear Facility Design.

(1) Nuclear facility design objectives must include multiple layers of protection to prevent or mitigate the unintended release of radioactive materials to the environment, otherwise known as defense in depth. These multiple layers must include multiple physical barriers unless the basis for not including multiple physical barriers is documented in the DSA and approved by DOE.
(2) Defense in depth must include all of the following—
(a) choosing an appropriate site;
(b) minimizing the quantity of material at risk;
(c) applying conservative design margins and quality assurance;
(d) using successive physical barriers for protection against radioactive releases;
(e) using multiple means to ensure critical safety functions needed to—
1 control processes,
2 maintain processes in safe status, and
3 confine and mitigate the potential for accidents with radiological releases;
(f) using equipment and administrative controls that—
1 restrict deviation from normal operations,
2 monitor facility conditions during and after an event, and
3 provide for response to accidents to achieve a safe condition;
(g) providing means to monitor accident releases as required for emergency response; and
(h) establishing emergency plans for minimizing the effects of an accident.
(3) Hazard category 1, 2, and 3 nuclear facilities must be sited, designed, and constructed in a manner that ensures adequate protection of the health and safety of the public, workers, and the environment from the effects of accidents involving radioactive materials release.

Describe the current status of Plutonium Shipping

It is clear that LANL scientists must integrate closely with the work to be performed in the CMRR and this is used as a justification for co-location. The precedent of successfully working with SNL, LLNL, NTS, PTX, etc has already been set.

Please describe the current status of Pu shipments. Are Pu samples shipped to other DOE nuclear complex sites? Are any of these shipments because samples are being analyzed offsite? Is Pu shipped for experiments at other facilities? Any and all shipments must be analyzed in the SEIS. Is shipment of Pu a required capability for NNSA, independent of CMRR? If so, why must the CMRR be co-located with PF-4? Will the Lab have larger capacity with the NF as opposed to shipping the samples offsite? Will the NF be safer than shipping these samples? Will the NF cost more than shipping these samples? Will NF be safer than shipping these samples?

All Impacts of NF Construction on the NMED Consent Order Must Be Analyzed

Cleanup of the existing mess must be the priority – not the new Nuclear Facility. DOE made a commitment to cleanup the legacy waste sites at LANL when it signed the Consent Order with the New Mexico Environment Department (NMED) on March 1, 2005. The Order requires cleanup of certain sites by December 31, 2015. Please analyze the impacts of construction activities for NF on cleanup activities, including those at the nearby Material Disposal Area C (MDA C).

- DOE proposes to realign Pajarito Road in order to accommodate the new NF. Impacts of this realignment must be included in this SEIS.
- Impacts on possible excavation of MDA C must be analyzed as a connected action to the realignment.
- The closure plans for MDA C and MDA G have not been decided. How can the impacts to the closure plans of these, or any site, be known until the closure plan itself is known?
- Impacts on proposed waste operations at TA-63 must be analyzed.
- Explain how it is known that that all Consent Order milestones will be met while $5 billion is being spent on construction of the NF.

We request that construction on the NF not start until all requirements of the Consent Order are met.

Environmental Justice – Both Economic and Ethnicity Analysis Are Needed

Los Alamos County is the third richest county in the U.S.A. It is surrounded by some of the poorest and most ethnically diverse counties in the country. Therefore, shipping waste to anywhere else is inherently an environmental justice issue. DOE must address the following questions: How many jobs will be created for local residents? How long will these jobs last? Will people be brought in from outside of the area to work at these facilities? If so, what positions will they fill? How many construction workers will be needed, by year?

- Where do the economic benefits end up?
- Please analyze the socioeconomic effects for all surrounding New Mexico counties.
- How much of every dollar spent for construction would actually stay in northern New Mexico?
- What is the impact of housing construction workers in local communities?
- What are the risks of increased transport of materials to and from the site?

Analyses Must Protect Those Most at Risk

Many federal standards for protection of human health, such as limits on how much residual radiation will be allowed in contaminated soil, are based on "Reference Man." He is defined as a hypothetical adult Caucasian male who is 20 to 30 years old, 154 pounds in weight, five feet seven inches tall, and is "Western European or North American in habitat and custom." He does not represent other humans, including women, children, and embryos/fetuses, that are more sensitive to the harmful effects of radioactive, toxic, and hazardous materials. All analyses must address the risk to a

pregnant woman farmer, her fetus, and her other children under age 18, rather than "Reference Man." As a matter of reproductive and environmental justice, the most potentially vulnerable human beings must be protected.

New Environmental Monitoring and Reporting Requirements Must Be Met

For example, the State of New Mexico Water Quality Control Commission has tightened monitoring requirements for plutonium, tritium, and other radioactive contamination in a segment of the Rio Grande deemed "at greatest risk from potential LANL discharges." The order, adopted earlier in 2010, reflects the commission's concern that "discharges from Los Alamos National Laboratory (LANL) could threaten public water supplies on the Rio Grande." Please describe all discharges form the NF and their final disposition.

The new criteria require public notification if water samples taken from the Rio Grande near LANL have a plutonium concentration exceeding 1.5 picocuries per liter. Federal law requires corrective action at 15 picocuries per liter. The Commission's criterion for tritium is 4,000 picocuries per liter, five times stricter than the federal limit of 20,000 picocuries per liter.

Present Waste Processing and Disposal Facilities Are Failing and Must be Analyzed as Connected Actions

DOE must analyze impacts to all other facilities that are required to support operations at the NF. Uncertainties surround the current support facilities. For example,

- DOE recently postponed a new Radioactive Liquid Waste Treatment Facility because the estimated costs increased from $100 million to $350 million;
- DOE's plans for a 63-acre expansion for low-level radioactive waste have been delayed for years; Area G will be closed in 2015 under the Order; and
- DOE proposed a new Transuranic Waste Facility (TRUWF) to replace operations at Area G, but subsequently withdrew the proposal.

DOE must fully analyze all alternatives, including no construction of the NF, if these facilities are not available.

From the Final Complex Transformation SPEIS October 2008 Summary Pg. S-38

> ***S.3.4.1.2.1 Los Alamos Upgrade Alternative***
>
> Los Alamos could support pit production requirements using existing and/or new facilities at TA-55, which is the current site for the Plutonium Facility (PF-4). The planned CMRR Facility would be located in TA-55. In addition, LANL has several existing and planned facilities, all of which are included in the No Action Alternative, capable of supporting plutonium operations, including: the Radioactive Liquid Waste Treatment Facility, the solid waste characterization and disposal site (in TA-54), the Sigma Building (in TA-03), the Radiochemistry Facility (in TA-48), a new radiography facility (in TA-55), and a new solid-waste staging facility.

These facilities are examples of facilities that must be included in this SEIS.

Where Will the Waste Go? To Use DOE Terminology: What is the "Path Forward?"

Given the anticipated lack of disposal facilities for low-level radioactive, toxic, and hazardous wastes at LANL, DOE must explain in detail where that waste will be disposed, how it will be transported to an off-site facility, and any potential impacts to communities along the route. Please describe the routes. DOE must specify how many shipments will occur by truck or train or any other means. Further, it must specify how many shipping containers will be needed, their costs, and whether they already exist or whether new containers will have to be developed and manufactured.

What Does LEED Certified Mean When Waste Generation Continues, as well as Air Emissions and Discharges to Canyons Which Flow to the Rio Grande?

DOE is very proud that the Radiological Laboratory/Utility/Office Building (RLUOB) portion of the CMRR Project will be Leadership in Energy & Environmental Design (LEED) certified, possibly a "silver" award. But in the 2003 Final EIS for the CMRR Project, DOE estimated:

- Waste generation may double, triple, or even quadruple, which violates DOE pollution prevention policies;
- Air emissions are expected to increase several fold; and
- Annual water consumption may be 10.4 million gallons; a portion of which will be discharged to the canyons that flow to the Rio Grande.

Why should a LEED certified building generate any waste, emit contaminants into the air, or discharge contaminated water into the canyons? Please explain.

From Executive Order 13423 *Strengthening Federal Environmental, Energy, and Transportation Management* - "Beginning in 2008, Federal agencies must reduce water consumption intensity through life-cycle cost-effective measures, relative to the baseline of the agency's water consumption in fiscal year 2007 by 2 percent annually through the end of FY 2015 or 16 percent by the end of FY 2015."

Describe the impacts of the NF on for compliance with Executive Order 13423.

However, in 2006, when the public questioned the amount of water DOE was proposing to use for continued operations at LANL, DOE responded that "[w]ater demands at LANL combined with the larger and growing demands of other Los Alamos County users could require up to 98 percent of the currently available water rights." (*Final Site-Wide Environmental Impact Statement for Continued Operation of LANL,*DOE/EIS-0380, May 2008, p. S-26. Manufacturing rates were held to a maximum of 20 plutonium triggers per year.)

Describe impacts of the NF on water usage.

Describe the impacts of the NF on Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance.*

- Describe all pollution prevention and waste management practices and activities to comply with this Order.

Analysis of Climate Change Impacts Required – "Just-Do-It"

The DOE NEPA Lessons Learned Quarterly for June 2009 states, "Given the advances in climate science, extensive litigation, and potential regulation, there is little doubt that DOE will need to analyze the reasonably foreseeable effects of greenhouse gas (GHG) emissions in its NEPA documents." On February 18, 2010, the Council on Environmental Quality released draft guidance to the public for comment about how "Federal agencies can improve their consideration of the effects of GHG emissions and climate change in their evaluation of proposals for Federal actions under the NEPA." While the guidance is being developed, the Office of NEPA Policy and Compliance recommends taking a "just-do-it" approach to considering GHGs in NEPA analyses. DOE should do so in this SEIS process.

Any Analysis Must Include the Decontamination, Decommissioning and Demolition (DD&D) of the Existing CMR Building

The 2004 Record of Decision (ROD) for the CMRR Project stated the existing CMR building would be DD&D in its entirety. However, the actual implementation of these decisions is dependent on DOE funding levels and allocations of the DOE budget across competing priorities, including construction of a new NF.

At the time it was built, the existing CMR was the largest building in New Mexico at 550,000 square feet. The 2004-ROD stated DOE would submit a work plan, but it did not specify to whom the work plan would be submitted. DOE must provide its DD&D work plan as part of its NEPA analysis. We must review the plan now in order to ensure that the DD&D activities will become part of the complete NEPA analysis as a "connected action."

Update Impacts to Endangered Species

Please analyze any potential impacts to the Mexican Spotted Owl.

All DNFSB Risk Analyses Must Be Considered

All Defense Nuclear Facilities Safety Board (DNFSB) reports and recommendations should be incorporated into the new SEIS. DNFSB monitors the LANL's nuclear operations. The Board has made a number of critiques and suggestions over the years that should be incorporated into the new SEIS to improve future operational safety at LANL. The effects of LANL not following DNFSB recommendations in a timely fashion should be considered. We also ask that DOE recalculate the accident scenarios and consequences used in the 2003 CMRR EIS to address the concerns and comments expressed by the DNFSB over the past seven years.

Cumulative Impacts from Past, Present and Reasonably Foreseeable Actions
NEPA requires DOE to address the cumulative impacts on the 50-mile radii surrounding DOE facilities and missions. DOE must be specific about potential impacts to water, air and soil, environmental justice, transportation, economics (including tourism), emergency preparedness, and waste generation.

Update the Status Of Compliance With All Applicable Federal, State And Local Statutes And Regulations
Include all international agreements, and required Federal and State environmental permits, consultations, and notifications.

- What portions of the NF will need to be RCRA permitted?

Post Transcripts Of All CMRR SEIS NEPA Meetings on the DOE Website
The American public has a right to read and understand the full range of the public debate. Please promptly post the transcript and posters following the scoping meetings. Please promptly post the transcript and posters following the draft EIS meetings.

Place All SEIS Related Documents Online Immediately
At the request of the public, DOE has posted documents specifically related to the NEPA processes online. These websites facilitate better public participation and comments. DOE has an excellent recent history concerning NEPA action websites, and this practice must be made consistent across all DOE sites. Please use the following examples as guidelines –

- Mercury Storage EIS
  - http://www.mercurystorageeis.com/default.htm
- LANL Site-wide Environmental Impact Statement Related Documents
  - http://www.doeal.gov/laso/NEPASWEIS.aspx
- Complex Transformation SPEIS
  - http://www.complextransformationspeis.com/index.html

Please Make All Reference Documents Available To The Public On The DOE Website As Soon As Possible
In order for the public to make meaningful and informed comments on the draft EIS, all reference documents must be available when the comment period on the draft begins. In our experience, the cited reference documents form the baseline foundation for all DOE NEPA processes, but yet the Department is often negligent in making those reference documents available in a conveniently accessible and modern fashion.

Intentional Destructive Acts Must Be Evaluated
What will the potential impacts be from an accident or terrorist attack at CMRR-NF site? What emergency response services are going to be available should this happen? What will be the impacts of an accident or attack during transportation? What emergency

response services are going to be available should this happen? Any and all possible terrorism attacks must be considered. Specifically state the weights, velocities, and general parameters used in each analysis.

- An unclassified summary of these impacts must be included in the EIS.
- The TRUWF was recently moved from TA-50 to TA-63 to lessen the possible aircraft crash impacts. How do these rules impact the location of the NF?
- With the concerns regarding sufficient offset distance on Pajarito road and the limited distance available on site due to the adjacent canyon, maybe the chosen site is too small.

Consider the JASON report on "Rare Events" in the analysis of Intentional Destructive Acts. Describe the models used. From the Report:

> "Rare events" specifically refers to catastrophic terrorist events, including the use of a weapon of mass destruction or other high-profile attacks, where there is sparse (or no) historical record from which to develop predictive models based on past statistics… One problem is that rare events are rare. There will necessarily be little or no previous data from which to extrapolate future expectations in any quantitatively reliable sense, or to evaluate any model. In the extreme, how can the probability of an event that has never been seen or may never even have been imagined be predicted?... There is no credible approach that has been documented to date to accurately anticipate the existence and characterization of WMD-T threats…The combined urgency of the rare event threat, the difficulty of evaluating rare event models, and the complexity of social sciences problems has led some to advocate the suspension of normal standards of scientific hypothesis testing, in order to press models quickly into operational service. While appreciating the urgency, JASON believes such advice to be misguided. The threat of "rare events" will be with us for a long time… There is danger in premature model building and the use of such models, to the exclusion of careful data collection.

All Potential Impacts From Postulated Accidents Must be Analyzed

Recent NF procurement documents request equipment that can withstand 27,000 rem (see below). The Requests For Information project "Design Basis Accident Environmental Conditions" that include "One (1) accident estimated at 27,000 rem over the 50-year life of the CMRR-NF facility." Please describe this postulated accident in detail.

	Item	Maximum	Minimum	Notes
Design Basis Accident Environmental Conditions	Temperature, °F	104	5	Environmental conditions specified are the maximum and minimum abnormal indoor conditions in which the fan will be placed and operated. Temperatures are To Be Verified.
	Relative Humidity, %	N/A	N/A	
	Radiation Environment: One (1) accident estimated at 27,000 rem over the 50 year life of the facility			
	Other Conditions			

The reference is made in the RFI's for:

- Safety Significant Air Handling Units
- Bubble Tight Isolation Damper Assemblies

- HVAC Fan Assemblies
- Nuclear Air Treatment Systems

Why is equipment being specified to withstand 27,000 rem? Any impacts to tourism must be analyzed if there is an accident. Any impacts to property values must also be analyzed. For that matter, how would accidents at nearby facilities impact the Nuclear Facility?

Emissions From the Utilities Must Be Reexamined

The NF is now twice the size that was analyzed in the 2003 CMRR EIS. The environmental impacts of larger boilers must be analyzed.
Are the utilities for the NF located in the RULOB?
Will additional electric power lines be required?

All Potential Effects On The Public Health Must Be Analyzed

Exposure to hazardous materials under routine operations must be included.

Consideration of The Pajarito Road Re-alignment Must Be Included in This SEIS

This Re-Alignment is currently a categorical exclusion.

This SEIS Should Be Supplemented With Annual Updates

Because the NF project may last over ten years, updates to this SEIS should be prepared annually, analogous to the LANL SWEIS yearbook. They should list the changes and/or accuracy of the estimates made in this SEIS, with public notification and the opportunity to request a paper copy.

All Impacts on Surface And Groundwater Must Be Analyzed

- Please describe all unavoidable adverse environmental impacts.
- Describe any proposed mitigation.
- Describe all construction impacts.
- Describe the storm water pollution prevention.

All Impacts on Air Quality Must Be Analyzed

- Please include global climate change and noise.
- Describe all unavoidable adverse environmental impacts.
- Describe any proposed mitigation.
- Describe all construction impacts.

All Impacts On Geology And Soil Must Be Analyzed

- Please describe all unavoidable adverse environmental impacts.
- Describe any proposed mitigation.
- Describe all construction impacts.

Potential Impacts On Land-Use Plans Must Be Analyzed

Include policies and controls, and visual resources.

- Describe the future land use

Thank you in advance for your consideration of these scoping comments. Again, we look forward to the NNSA's comprehensive response.

Jay Coghlan
Executive Director

Scott Kovac
Research and Operations Director