nuclear watch new mexico

Comments on the Necessary Scope of an Environmental Impact Statement For Operation of a BioSafety Level-3 Facility At the Los Alamos National Laboratory

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Dear Ms. Cummings:

Nuclear Watch New Mexico (NWNM) is pleased to submit these scoping comments for an environmental impact statement to evaluate operation of a BioSafety Level-3 Facility (BSL-3) at the Los Alamos National Laboratory (LANL). This BSL-3 will handle biological select agents (those that most lend themselves for use in bioweapons) such as anthrax, plague and Q fever. As you know, we have had an abiding interest in the facility ever since the Lab first announced its intent to build and operate it.

A Review Process Without Prejudice

We applaud the decision by the National Nuclear Security Administration (NNSA), the Department of Energy's semi-autonomous nuclear weapons agency and LANL's "landlord," to prepare a stand-alone environmental impact statement (EIS) for operation of the BSL-3 facility. Clearly, this should have been done in the first place instead of the lesser "environmental assessment" completed in February 2002, after which construction of the facility took place. Given facility construction, this is clearly an unusual EIS. The NNSA needs to concretely demonstrate an impartial and un-predetermined process leading to the ultimate decision to begin operations or not. It is difficult for a commenter to state precisely how the NNSA should accomplish that, but the burden is upon the agency to do so.

Some general scoping comments aimed toward encouraging an unbiased process are made here. The November 29, 2005, EIS Notice of Intent describes three operational alternatives that will be considered and analyzed:

1) The "Proposed Action Alternative," which is operations at the level permitted by Center for Disease Control (CDC) guidelines for a BSL-3 Facility;
2) Operations at a level permitted for a BSL-2 facility; and
3) A "No-Action Alternative," in which the facility would not be operated.

Additionally, the Notice of Intent states that other alternatives, including potential facility modification, could be identified during the scoping process.

First, we hope that the No-Action Alternative is more than just a straw man, but even we have to consider that literal no-action is not feasible in the sense that it would be a waste of taxpayer's money after construction of the building. In other words, it is highly unlikely that the building could ever just sit empty. In the interests of a truly unbiased process, one free of predetermination, we think it incumbent that NNSA offer some realistic alternatives for the use of the building other than biological operations at any level. To not do so inherently prejudices the process from the start toward biological operations of some kind. We, of course, can offer some alternatives stemming from our belief of the need for changing missions at LANL. Why not turn the existing building into a lab/test bed for renewable energy technologies and energy efficiencies? Or a lab/test bed/public demonstration center for improved and tangible cleanup technologies? Or a dedicated center for global climate change modeling aimed toward solutions? These are the kind of things that we would like to see, but again stress that it is the NNSA's responsibility to give real alternatives that are outside of just the "biological box."

As a detail, the draft EIS should disclose and discuss what, if any, biological equipment has already been installed that would bias against non-biological alternatives. Further, the draft EIS should discuss to what extent, if any, the fundamental design of the facility prejudices against possible decisions to have non-biological missions.

Again, we applaud the NNSA's decision to complete a stand-alone environmental impact statement for the LANL BSL-3. However, this is inconsistent with NNSA actions to soon begin BSL-3 operations at a roughly similar facility at the Lawrence Livermore National Laboratory. The go-ahead decision at Livermore was based on an environmental assessment that was largely copied from the preceding LANL BSL-3 environmental assessment. Yet the NNSA saw fit to withdraw the go-ahead decision for the LANL facility and eventually decided to prepare an EIS. Given the greater population and seismic risks in the Livermore area, plus the inherently more risky experiments (such as aerosolized experiments) planned for that facility, it is logical that the Livermore facility should be analyzed in a stand alone EIS as well. The new LANL BSL-3 EIS should explain this apparent contradiction and justify why the LLNL BSL-3 is not benefiting from a stand-alone EIS.

In contrast to the 2002 environmental assessment the new EIS must be electronically available on the Internet during the public comment period for the draft EIS, and preferably available to interested parties in both CD and hard copy. Additionally, all documents referenced by the EIS must be readily available upon request.

Cooperating Agencies in Preparation of the EIS

The section above on real non-biological alternatives for the existing building begs the question of how much say the NNSA would have in the matter to begin with. As previously noted, the NNSA is LANL's landlord, and hence is the lead agency in the EIS. The Notice of Intent states that NNSA has invited the Department of Homeland Security (DHS) to participate as a cooperating agency in the preparation of the EIS. Under "Supplementary Information" the Notice of Intent begins with "The United States has identified an emerging threat to homeland security posed by the possible use of biological weapons," from which the NNSA derives the fundamental rationale for the facility. Operational funding for the BSL-3 is likely to be in whole

or large part from DHS (the draft EIS should disclose projected DHS annual amounts and that of any other agencies). To get to the point, NNSA should insist not only on DHS's "cooperation" in the EIS process, but on its central participation as well. Moreover, given NNSA's repeated assurances in the 2002 environmental assessment that the BSL-3 would follow CDC guidelines the NNSA should insist upon that agency's central participation as well.

Expanded Operations?

As already stated, the Proposed Action Alternative is operations at the level permitted by CDC guidelines for a BSL-3 Facility. However, those BSL-3 guidelines are very broad, and allow for an expanded range of operations relative to what was analyzed in the 2002 environmental assessment. Moreover, a December 2, 2005 "Dear Interested Party" letter from the NNSA Los Alamos Site Office states "NNSA is now proposing to operate this BSL-3 Facility with a broader scope of work than originally proposed in 2001."

Specifically, the EIS should disclose and discuss:

- Exactly what the broader scope of work may be compared to what was described and analyzed in the 2002 environmental assessment.

- Any contemplated increase to the total inventory of pathogens and infectious agents relative to the 2002 environmental assessment (EA).

- Related, the 2002 EA stated "The BSL-3 facility will have only a few operations or activities that would hypothetically place larger (up to 10 liters) quantities of materials containing infectious organisms at risk at any point in time" P. 89. However, the EA was arguably dissembling in that it disclosed only quantities that were to be in handling processes, and not the total inventory actually in the facility. Total inventories, including but not limited to that in freezers, should be given in the EIS.

- Any plans for aerosolized experiments, which the 2002 environmental assessment previously barred. We again note that such experiments are approved for a similar BSL-3 at the Lawrence Livermore National Laboratory in California.

- Related to aerosolized experiments or not, any plans for the use of biological select agents on animals, which has been approved for the Livermore biolab on rodents.

- The 2002 environmental assessment gave virtual carte blanche for the range of genetic modification experiments that the LANL BSL-3 facility could engage in, without any substantive discussion and analysis. The EIS should not fail to do so, and should give some clear and concrete boundaries to what those modifications might be. Our concern is heightened by past reports that the American military establishment possibly worked on genetically-modified "superbugs" as part of a purportedly defensive program.

- The American military and intelligence establishment has also reportedly worked on prototypical biological weapons, again purportedly for defensive purposes. For example, on September 2001 New York Times article reported that the Central Intelligence Agency had a classified program called Clear Vision in which the agency built and tested a model of a Soviet-designed germ bomb. Arguably, any research, even defensive, that begins to weapon-

ize biological select agents begins to violate the Biological and Toxin Weapons Convention (BWC). The EIS should disclose and discuss any possibility of research into prototype weapons, even for defensive purposes. Generally, the EIS should discuss how future work at the LANL BSL-3 would not violate the BWC in both substance and appearance.

• The Notice of Intent did not explicitly rule out possible operations at the highest level BSL-4, which is reserved for handling pathogens that cause incurable diseases such as Ebola or Marburg Fever. The 2002 environmental assessment seemed to allow a loophole for that possibility in the event of undefined national security needs. While we recognize that any BSL-4 operations are highly unlikely at the LANL BSL-3, the EIS should explicitly and categorically bar any such future operations, or failing that fully explain any loophole that could conceivably allow for them.

• The EIS should fully discuss and disclose whatever future work the facility might do on exotic disease-producing organisms or agents. Under "LANL Proposed Action Microorganisms" the 2002 EA stated, "in addition, the proposed laboratories could handle other bacterial or viral infectious organisms not specifically regulated by CDC or other Federal agencies…." P. E1-4. That is tantamount to NNSA issuing itself a blank check for whatever future select agents it may wish to work with at LANL (for example with prions). In our opinion, such a vague boundary (or rather lack of bounding) would be highly inappropriate in the draft EIS.

International Example

The EIS should fully justify why the NNSA and DHS should locate an advanced BSL-3 at the Los Alamos National Laboratory, which, after all, is a secret nuclear weapons facilities. We believe this co-location sets a bad international example, one we suspect the U.S. would be leery of in another country. We recognize that the Notice of Intent and the earlier environmental assessment categorically ruled out any work on offensive biological weapons at the facility. We expect that to be strongly re-emphasized in the EIS.

However, the EIS needs to go beyond mere declarations and offer some solid confidence building measures, indeed even verification mechanisms. How is no offensive use work to be verified, given the inherent potential dual-use nature of the work? In verbal remarks by NNSA and/or Lab officials, the relative physical smallness of the BSL-3 facility has been cited as a barrier to offensive work, but given technological advances this does not eliminate the concern. Geopolitically, the concern is deepened given that the current Administration ended negotiations in 2001 that would have led to international inspections under the BWC. What is to offer international assurances given the total lack of concrete verification protocols, and the unfortunate decline in the U.S.'s reputation abroad? A nation's word alone is not enough.

Also in verbal remarks, NNSA and LANL officials have said essentially that the BSL-3 facility would never violate the BWC's prohibition against offensive bioweapons research and development. However, NNSA and LANL officials should understand that simple verbal remarks to the effect of "we" would never violate a treaty will not inspire confidence in all sectors of the domestic or international communities. For example, many believe, internationally and domestically, that the NNSA and LANL are acting contrary to the 1970 NonProliferation Treaty (NPT), which requires nuclear weapons states to eventually disarm their stockpiles, and subsequent concrete measures toward that end pledged to at quadrennial NPT Review

Conferences.

We expect that the existence of the Institutional Biosafety Committee (IBC) will be another reason offered by NNSA and the Lab why the LANL BSL-3 could never undertake offensive bioweapons work. The IBC is purported to be an oversight committee with some public representation that approves all proposed projects at the BSL-3 facility, and would naturally act as a barrier to any offensive work. However, we have found the IBC to not be generally representative of the public, and public notice of its meetings to be spotty at best. Further, classified work or programs could be performed at the BSL-3, which the EIS should disclose to the fullest extent possible. The EIS should discuss how the IBC would deal with or approve of any classified work, with an aim of assuring that no offensive work takes place (or even in appearance). The IBC should have more public members with no vested interest in the BSL-3. Finally, the NNSA should disclose in the draft EIS whether it believes or not the activities of the IBC are wholly subject or not to the provisions of the Federal Advisory Committee Act.

The EIS should fully justify why DHS should not, or cannot, fulfill its needs at a non-nuclear weapons location. We formally state that we are not against enhanced national defenses against potential bioterrorism, which are regrettably necessary in today's world. However, we most seriously question whether a secret nuclear weapons site is an appropriate location for many reasons (including LANL's checkered safety and security record), foremost amongst them the possibly adverse international example it could set.

The Need for Programmatic Review

The National Nuclear Security Administration (NNSA) had a well-defined program called the Chemical and Biological National Security Program (CBNP). The CBNP was multi-laboratory and spread across the nation, with biofacilities identified by the DOE Office of Inspector General at the Brookhaven, Lawrence Berkeley, Lawrence Livermore, Los Alamos, Sandia-CA, Sandia-NM, Oak Ridge, Pacific Northwest and Idaho Engineering and Environmental National Laboratories.

In 2003 the CBNP was transferred to the Department of Homeland Security (DHS). Since 9.11, massive amounts of taxpayer's dollars have been invested into what has been described as a proliferation of biological laboratories to address bioterrorist threats. There has been no apparent coordinated effort to avoid redundancies, or to analyze whether this proliferation of biolabs could actually decrease national security by creating more access to biological select agents. This is a not inconsequential concern given the fact that the main "person of interest" in the October 2001 anthrax attacks was a possibly rogue government scientist.

While the CBNP was still under the NNSA's direct jurisdiction, the DOE Office of Inspector General released a February 2001 report, which recommended that the NNSA:

1. Identify the types and locations of activities being conducted by the Department involving biological select agents and select agent materials.
2. Initiate actions to ensure: (a) appropriate federal oversight; (b) consistency in policy; and (c) standardization of implementing procedures for biological select agent activities being conducted by the Department…

No apparent progress was made after that report.

As a result, in July 2005 the DOE IG released another report entitled "Coordination of Biological Select Agent Activities at Department of Energy Facilities." This report stated that

the DOE is in the process of planning and/or constructing eight BSL-3 facilities. It also found that the Biosurety Working Group created to address the coordination issues in the 2001 DOE IG report was disbanded and that no subsequent entity was assigned responsibility to coordinate biological select agent activity within the Department. Further, it found that

> There is no assurance that projects are being directed to the laboratory best suited to meet those requirements; that resources are being effectively utilized; that security implications are being addressed; and, that capabilities are not being inappropriately duplicated… Currently, each facility has to develop its own pre-start-up safety criteria, which has varied from site to site for BSL-3 laboratories under construction… as the number and biosafety level of biological laboratories increase, so does the risk of both insider and outsider attacks on those facilities. Security management of biological select agents poises unique challenges because biological select agents can replicate, making theft of minute quantities significant. DOE/IG-0695, p. 5, emphasis added.

In 2002 the Government Accountability Office stated that because the NNSA's Chemical and Biological National Security Program consolidated funding into a single allotment for each national laboratory conducting research "officials from this research area were unable to provide us with even a list of their ongoing projects." GAO-02-904, p. 15

The above findings, which apparently the NNSA chooses to ignore given its apparent inaction, cries out for programmatic review as per the requirements of the National Environmental Policy Act (NEPA). DOE NEPA Implementation Regulations, Sec. 1021.330(a), "Programmatic (including Site-wide) NEPA Documents," states

> When required to support a DOE programmatic decision (40 CFR 1508.18 (b) (3)), DOE shall prepare a programmatic EIS or EA (40 CFR 1502.4). (Emphasis added.)

According to the DOE IG, the NNSA, a semi-autonomous agency within DOE, has made the decision to proceed with BSL-3 facilities at eight of its sites. Clearly, the potential risks are significant, given that theft of minute quantities can cause great public harm. In accordance with NEPA responsibilities and statutes, NNSA should and must prepare a Programmatic Environmental Impact Statement (PEIS) that collectively analyzes the cumulative impacts of its proposed BSL-3 facilities, with DHS as a cooperating agency. There is established precedence in that the U.S. Army completed an April 1989 final programmatic environmental impact statement on its Biological Defense Research Program. We believe that the NNSA and DHS as coordinating agency is under the same NEPA obligation to complete a PEIS, and should proceed to do so without delay. The LANL BSL-3 EIS should explain in detail the NNSA's and DHS' failure thus far to complete a PEIS, and how a continuing failure to do so would be justified.

Environmental, Safety, Health and Security Risks

The following issues should be analyzed in the LANL BSL EIS:

• First, all risk analyses in the 2002 environmental assessment were essentially predicated upon the amounts of pathogens or infectious agents present during handling processes, an order of magnitude or more below what may actually be present at the facility. Risk analyses must be based on the total amount of inventory (which, again, should be disclosed in the EIS), including storage. Frozen pathogens or infectious agents can obviously become materials at risk in the event of severe events that cut off the electrical supply for extended periods

of time (conceivably can even beyond the immediate diesel supply for emergency backup generators).

- The 2002 EA stated

  NNSA regrets that members of the public do not trust the ability of the University of California to adequately perform their moral and contractual obligations… NNSA is confident that LANL can be operated safely and securely no matter the level of overall operations… The safe operation of nearly 300 BSL-3 facilities within the U.S., including a university research BSL-3 facility located in the middle of Albuquerque, NM, substantiates the analysis presented in this EA with regards to this issue. Representatives of the CDC periodically inspect all BSL-3 facilities. If constructed, representatives would also inspect the LANL BSL-3 facility, as would representatives of the NNSA. EA, P. 19.

NNSA's confidence in UC performance can no longer be so categorically stated given the operational standdown of the last half of 2004. We, on our part, have little confidence that performance will be improved through UC's new management partnership with Bechtel, Inc. The latter has recently shown very poor performance at the Hanford and Yucca Mountain Sites. The citing of safe operations at 300 existing BSL-3's, including one in Albuquerque, is of limited relevance to future operations at LANL's BSL-3. We understand that the supermajority of these BSL-3's do not work so heavily with bioweapons select agents as the LANL facility will after beginning operations. The draft EIS should draw a more clear distinction between the future LANL BSL-3 activities and that of other BSL-3's. Also, more detailed justification should be given why future activities at the LANL facility couldn't be done at one or more of the 300 existing BSL-3's. Finally, the draft EIS should set forth an established timeline for CDC inspections, something far more concrete than "periodically."

- The 2002 environmental assessment asserted

  Accident scenarios usually envisioned for DOE facilities, that would normally be seen to exacerbate or enhance a release or spread of the hazardous materials, would for a BSL-3 facility potentially render these materials innocuous (heat, fire, and wind). These are not applicable for microorganisms and would usually result in microorganisms being killed. Consequently, catastrophic events such as earthquake, fire, explosions and airplane crashes, normally seen as initiating events in DOE accident analyses, were viewed as having the potential to reduce the consequences of releases.

The use of the words "normally" and "usually" is instructive. One of the key jobs of federals agencies under NEPA is to analyze the risks of worse case scenarios, which in this case should include physical breeches of facility containment and the prolonged loss of freezing capabilities. In a seemingly contradiction to the above categorical assertion the 2002 EA notes how Coxiella burnetii (Q fever) is highly infectious and at the same time "remarkably resistant to drying and environmental conditions." P. 91. This possible contradiction needs to be better explained to the public. The EIS must disclose all types and forms of microorganisms and infectious agents that might be present and the related risks of handling each.

Would there be spore forms of anthrax present at the facility, forms that are known to persistently survive in the open environment for decades at a time? There are also forms of tuberculosis in which the pathogens are known to survive in the open environment for extended periods of time. Would possible genetic modifications of pathogens and infectious agents at this BSL-3 facility possibly enhance their survival in the open environment? We find the 2002 environmental assessment's general assertion that catastrophic events would only serve to

mitigate the risk to be far too quaint and self-serving. The risks of containment breeches need to be rigorously analyzed for all forms and types of pathogens and infectious agents that may be handled. It is not enough to simply wave away the potential risks by stating in effect that catastrophic events can only serve to lessen the threat.

- The 2002 LANL BSL-3 environmental assessment relied heavily on the history of the U.S. Army's biological select agent program. The relevant paragraph is

> A literature search and discussions with BSL-3 laboratory regulators and operators (CDC, NIH, and the U.S. Army) revealed no instances of infectious materials released from catastrophic accidents at microbiological laboratories. According to the U.S. Army (DA 1989), the likelihood of such catastrophic occurrences is too small to be considered as reasonably foreseeable. No such event has occurred in the more than 50 years in which the military has been conducting biological defense research activities (DA 1989). Based on this historical information, this hypothetical scenario was not analyzed further in this EA. P. 89.

That may be true for a 1989 Army document. However, the fundamental rationale for the LANL BSL-3, and for that matter other BSL-3's at NNSA sites, is to address the threat of bioterrorism post-9.11 and October 2001 anthrax attacks. Therefore, a terrorist attack on the BSL-3 facility itself cannot be ruled out, nor can the possibility of a rogue scientist within the facility be ruled out. The new EIS needs to concretely address and analyze these threats.

Also, from the quoted EA paragraph, an uninformed reader could get the impression that the there has never been a release of infectious materials from U.S. Army facilities. On April 24, 2002, the Washington Post reported that there had been two leaks in that same month of anthrax spores at a Fort Detrick BSL-3, with a fear that the contamination could have been inadvertently spread to a commercial laundry. LANL itself has already had mishaps, such as the widely reported October 2001 incident in which live anthrax spores were shipped to the Lab when it did not have CDC-authorization to work with live samples. There are also international incidents that the EIS should consider, such as repeated SARs infections in BSL-3's in 2002-2003 and the mailing by a private firm of 3,700 samples to labs around the world of a highly virulent flu strain in April 2005.

- The 2002 environmental assessment stated

> When completed, LANL safety and security documentation (Facility Safety Basis, Facility Safety Plans, Hazard Control Plans, Human Pathogens Exposure Program, and security assessments) would provide partial framework for operation of the BSL-3 facility. P. 41.

The passage had a footnote, which stated

> Safety and surety documentation, as well as facility specific protocols, are not completed until after decisions have been made to construct and operate building and detailed building designs have been completed. Therefore, these are future documents that would be completed for the BSL-3 facility if NNSA decides to proceed with its construction and operation.

NNSA did make the decision to construct and operate the facility. Although NNSA later withdrew the decision to operate, the agency and LANL likely drew up or began to draw up the above plans and assessments, which should be incorporated into the EIS and updated as needed. In our view, the 2002 environmental assessment was grossly inadequate in its analyses of safety and security issues, especially in the lack of a hazard control plan, and hope to see this rectified in the EIS.

• The 2002 environmental assessment stated that one of the main transport mechanisms for biological samples to and from the LANL BSL-3 would be through the U.S. Postal Service. The EIS should critically examine whether this is prudent. Would all specimens be marked as a biological hazard, as they should be? If so, would this raise the risk of illicit diversion? Has the NNSA consulted with the U.S. Postal Service? With the American Postal Workers Union?

• The Notice of Intent states that NNSA has determined that it is necessary "to conduct additional seismic analysis of the location of the building on fill material on the sloping side of a canyon." The EIS should describe slope gradient, the fill used and the results of compaction tests.

Slope gradient and the use of fill material will likely only increase the potential impact of any seismic events on the BSL-3. The 1999 LANL Site-Wide EIS indicates that the Rendija Canyon fault runs through Technical Area (TA)-3, where the BSL-3 is located. The fault has a potential of an earthquake up to 6.5 on the Richter scale and "TA-3 does have faults with vertical displacements in the range of 1 to 10 feet." 1999 LANL SWEIS, Table 4.2.2.2-1 and Section 4.2.2.2. The EIS should rigorously analyze these potential seismic threats, using the most current information and data available.

• The 2002 environmental assessment briefly stated that the CDC would regularly inspect the LANL BSL-3. NNSA should enter into a formal Memorandum of Understanding with CDC so that it is assured that those inspections regularly take place. Additionally, given that CDC likely has a lean budget in comparison to NNSA, the agency should provide CDC with funding for the cost of those inspections. These arrangements should be discussed in the EIS.

• We note that the Defense Nuclear Facilities Safety Board has repeatedly stated that under-calculated "leak path factors" are a persistent problem at LANL's nuclear facilities. The EIS should analyze and discuss a "leak path factor" for the BSL-3, using appropriate updated software, and explain the input parameters used.

• Please explain what insect and rodent control program will be in effect.

• Historically, LANL's fire protection program has not been up to par with fire protection programs at other DOE sites. We are in the middle of our driest winter in over ten years. Please explain how the BS-3 facility can possibly meet current fire safety requirements given the size and scope of LANL's site-wide fire protection issues.

• We believe that the section on socioeconomics in the 2002 EA was highly misleading. In the interests of possible environmental justice issues the percentage of the Hispanic population should be separated from the catch all "White Population." The percentage of Native Americans should be given. The exclusion of data from Rio Arriba County is inexcusable. The use of economic multipliers of two or more is first of all outdated, coming from a 1999 report evaluating 1996 LANL economic activity, and secondly highly implausible given they would outperform the private sector. We expect more discerning analyses and detailed data in the draft EIS.

These comments respectfully submitted,

Jay Coghlan,
Executive Director