



# Los Alamos Study Group

*Nuclear Disarmament • Environmental Protection • Social Justice • Economic Sustainability*

August 23, 2013

Dr. Peter Winokur, Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Ave. NW Suite 700  
Washington, DC 20004

## **Re: Thank you and follow-up to our Aug. 20 meeting**

Dear Dr. Winokur –

Thank you, your fellow Board members, and the staff present for the above meeting. Please also convey our greeting to Mr. Bader, whom we missed at the meeting.

We will badly miss Dr. Mansfield. We look forward to meeting his nominated successor Dr. Mossman, assuming he is confirmed as expected.

We remain grateful to the Board and its staff for their service. We know of no better-run agency in government.

We brought three topics to the meeting. In reverse order of presentation, these were:

### **1. Low and decreasing Department of Energy (DOE) and National Nuclear Security Administration (NNSA) transparency is creating hurdles for DNFSB success.**

Our request: NNSA and DOE control access to – and therefore the potential for peer review of – the facts and documents upon which DOE, NNSA, and DNFSB rely to assess public health and safety. We ask you to request from NNSA and DOE open versions of important documents and briefings, where appropriate. Much information is being inappropriately withheld, to the detriment of sound management and decision-making.

Discussion: DNFSB was founded as a result of informed public concern. Uninformed public concern is useless. DNFSB cannot succeed alone, especially over any period of time. It has become impossible for DNFSB to meaningfully communicate to the public on key issues related to its core mission. This isolates DNFSB within a closed administrative system and threatens the independence of its oversight.

Here are three examples of interest to us:

- DNFSB is supposed to protect public health and safety<sup>1</sup> but no details or methodology have been released to the public regarding the public health and safety risks of releases of plutonium from Los Alamos National Laboratory's (LANL's) TA-55 facilities in the event of accidents or intentionally harmful acts. We do not know the assumptions involved, the models used, or the results obtained. We do not know where the Maximum Exposed Individual (MEI) would be. We do not know the estimated

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<sup>1</sup> DNFSB's enabling statute refers to *public* health and safety, not worker health and safety. This underscores the importance of meaningful public communication by DNFSB, which is impossible if all relevant documents are sealed. Unlike nuclear workers, who are paid for their risks, the public derives no direct benefit from NNSA operations, only risk.

geography of deposition. We do not know what the economic impact of potential accidents and intentional harmful acts might be.

- DNFSB members have stated to us in two meetings that they believe underground tunnels would provide more safety than aboveground short-distance (~200 yard) pedestrian transport of radiological quantities of plutonium. Yet this has not been the practice at any DOE site to date, including LANL. And why should it be? Also, PF-4, like many other NNSA facilities, remains vulnerable from the air with or without connecting tunnels. We also remind the Board that enclosed underground spaces can quickly and easily develop severe safety problems under a variety of scenarios.

DNFSB is supposed to help DOE follow its orders.<sup>2</sup> We have found no DOE orders or regulations which incorporate the theory that tunnels are safer than above-ground transport. In our conversations, DNFSB members have not provided justifications for their preliminary views. Therefore we urge you to keep open minds on this question.

We note that DNFSB's enabling statute includes this new passage: "In making its recommendations the Board shall consider, and specifically assess risk (whenever sufficient data exists), *the technical and economic feasibility of implementing the recommended measures*" (emphasis added).<sup>3</sup> While in this case the Board is not making any formal recommendation, the principle of *feasibility* is always applicable. We have frequently expressed our concern to the Board that NNSA has had a practice of proposing very expensive future infrastructure projects, ostensibly to address safety issues, only to see delays, cost increases, and sometimes project cancellation, with attendant long-term continuation of operation in unsuitable, unsafe facilities.

We seek practical, near-term, affordable, long-lasting safety improvements consistent with rational mission requirements. In the case of plutonium infrastructure, NNSA has generally not proposed these. We have no reason to believe it is doing so now.

Two particularly egregious recent examples of bad planning assumptions are the post-CMRR-NF "realizations" that a) the floor space associated with aqueous reprocessing in PF-4 – on the order of 15,000 sq. ft. – could be repurposed without detriment to LANL programs, and b) the amount of material at risk (MAR) in the Radiological, Utility, and Office Building (RLUOB) could be multiplied by a factor of four without RLUOB becoming a nuclear facility. Many more examples could be cited from the past 25 years.

In the spirit of the above mandate and in light of abundant past experience, we think *the Board should take care to make sure the Board is presented with an evaluation of the relative "technical and economic feasibility of implementing measures to protect public health and safety"* in those cases where the task of making such feasibility estimates exceeds the capability of the small DNFSB. Obviously the Board, with a staff limited by statute to only 150 people, cannot make cost estimates for any infrastructure proposals to protect public health and safety, let alone alternative ones. NNSA can and should do that, but often doesn't.

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<sup>2</sup> "The Board shall review and evaluate the content and implementation of the standards relating to the design, construction, operation, and decommissioning of defense nuclear facilities of the Department of Energy (including all applicable Department of Energy orders, regulations, and requirements) at each Department of Energy defense nuclear facility." [Atomic Energy Act, Sec. 312, § 2286a\(b\)\(1\)](#).

<sup>3</sup> [Atomic Energy Act, Sec. 312, § 2286a\(b\)\(5\)](#).

DNFSB's work can only be as good as the information provided to it. Therefore we don't think the Board should remain passive with respect to evaluating fundamentally different infrastructure approaches to protecting public health and safety – evaluating only what is placed under the Board's nose, so to speak. There is no statutory bar to using common sense – or to requesting a common-sense presentation of alternatives when, realistically, the “technical and economic feasibility” of NNSA's various proposals across the weapons complex bears on the protection of public health and safety.

- We note that there is a *statutory* and *DOE regulatory* requirement for DOE and NNSA to evaluate the relative effectiveness of *all* reasonable alternatives to protect public health and safety, in the case of federal actions that could have a significant effect on the human environment. It is found in the National Environmental Policy Act (NEPA).<sup>4</sup> The NEPA statute demands public, tribal, and relevant agency peer review of agency proposals that could affect the human environment, which centrally includes public health and safety concerns – the core of your own mandate. At a minimum, therefore, you ought to be able to request the side-by-side review of alternative proposals to protect public health and safety, since this is otherwise required under NEPA for major projects.

Construction of any underground plutonium pit production facilities is clearly a major project for which DOE is required to produce an environmental impact statement (EIS). Why not request one?

**2. The proposed TA-55 tunnel and module complex has become the agency's preferred alternative, necessitating accelerated conceptual review and comparison with other approaches.**

Our request: As mentioned above, we ask that you communicate a desire to see (so you can you conceptually evaluate) alternatives. As noted above, one of the best ways to foster peer review of these alternatives is through the EIS process. Given your twin mandates of protecting public health and safety while evaluating technical and economic feasibility, you should ask for an EIS.

Discussion: As noted elsewhere in this letter we have reasons to believe that these underground modules and tunnels may take a long time to build, cost a great deal of money, and have great environmental impacts, all of which factors usually act as surrogate variables for a basic lack of practicality or “feasibility.” We also think there are dangers in the seismic response of articulated subterranean structures of this type. Upon information and belief, there are differing opinions in government regarding the necessity and appropriateness of “modules.” If the necessity of underground modules are a focus of LANL briefings to you, you may not be getting the whole story.

**3. There has been no closure, and there is still no clear path to closure, for TA-55 seismic concerns.**

**a. At the Radiological Laboratory, Utility, and Office Building (RLUOB):**

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<sup>4</sup> [42 U.S.C. 4321](#). DOE's NEPA regulations can be found at [10 CFR Part 1021](#); DOE's NEPA Order is [451.1B](#). These are among “all applicable Department of Energy orders, regulations, and requirements,” the implementation of which DNFSB is statutorily charged with reviewing.

Our request: We want the present informal discussions regarding the future of RLUOB brought into public view and appropriately formalized. One way – and by no means the only way necessary – in which this could and should be done is through an applicable public EIS and formal Record of Decision ROD.

Discussion: We asked what procedure you would follow for any conversion of RLUOB to a Hazard Category 3 Nuclear Facility, as LANL apparently proposed last year.<sup>5</sup> What is the quantity of Material at Risk (MAR) that begins to bother you in a RLUOB Nuclear Facility? Why? To our knowledge, the expected seismic performance of RLUOB has not been openly published. To what standard was it built? What quality assurance procedures were followed? What structural or equipment modifications might be necessary? Many similar questions could be asked.

LANL, NNSA, DOE, and, following them, DNFSB have repeatedly stated, over many years, that RLUOB would never be a nuclear facility and indeed would never have more than 8 grams of weapons-grade plutonium in it, total. That “8” grams has now been changed to “26” grams. If these formal promises are to be broken we need to understand how and why – and what other risks are in store for us.

We proposed that the existence of credible structural collapse scenarios for any occupied nuclear facility should be unacceptable. In our view, this should include any tunnels.

While we do not *a priori* think upgrading RLUOB to a HC III facility is *inherently* impractical if the MAR were sufficiently low, we believe DOE has no applicable EIS or (ROD) for such a choice. Neither do we understand the overall TA-55 safety context of any such modification.

**b. At PF-4:**

Our request: Please communicate to NNSA the need to fully prioritize remedies to the seismic fragility of PF-4 as well as its lack of a safety-class ventilation system and other core safety capabilities. The safety of PF-4 must come before any other TA-55 construction. PF-4 is in our view the most dangerous facility at LANL.

Discussion: We want the Safety Board to make sure NNSA prioritizes making PF-4 and all LANL buildings safe for workers and surrounding public. We haven't seen that prioritization over the past 20 years. Solving existing safety problems, like the lack of safety-class ventilation in PF-4, gets pushed into the future in favor of new construction and bad designs which turn out to be impractical and are never built. NNSA should not be allowed to neglect maintenance and safety upgrades at PF-4, as they are doing.

*The ongoing criticality safety problems and conduct of operations problems at the facility are emblematic of management attitudes that have neglected safety investments in existing facilities in favor of other corporate priorities. Objectively, LANS has mismanaged its plutonium infrastructure planning, wasting hundreds of millions of dollars on fundamental design errors at CMRR-NF, a building which we now know wasn't necessary in the first place and which could never have been built for the cost*

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<sup>5</sup> [Los Alamos National Laboratory Weapons Program, Laboratory Director Update](#), LANS/LLNS Mission Committee, Jonathan S. Ventura, June 2012.

estimated. As a result of these mistakes LANL continues to use the unsafe Chemistry and Metallurgy Research (CMR) building, which could and should have been closed years ago.<sup>6</sup>

LANL has proposed several different new plutonium-oriented nuclear facilities over the past 25 years. None of them have worked out. Now, in a fresh break from prior promises, LANL wants to build underground plutonium production "modules," to be connected to existing buildings by tunnels. We think this new plan is a waste of money and time and so far it looks to us like this plan is also inherently unsafe. We believe LANL's safest, fastest, and best options for increasing pit production capacity involve its existing buildings at TA-55.

We are concerned that there is a conflict of interest involved in the LANL management and operating (M&O) contractor being the entity that establishes the requirements and proposals for future construction, which construction it is also paid to manage. More than gross billings in the hundreds of millions, or billions, of dollars are involved. We are aware that the M&O contractor applies very significant overhead ("burden") rates to such construction, in some cases exceeding the value of the construction itself, and uses these taxes as a source of general laboratory funding.

Pit production, the supposed requirement for which has been the (fallaciously exaggerated) driver for new infrastructure, is only needed if different, untested warheads involving new-made pits are to be put into the arsenal. There is a large inventory of excess pits of the specific kinds used in the present arsenal. These pits will not significantly age over the decades in question.

Thank you again for your time and we look forward to your response.

/s/

Greg Mello, Executive Director

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<sup>6</sup> The CMRR-NF fiasco notwithstanding, we believe LANL could vacate the CMR building rapidly and safely if it so chose without any negative programmatic impact. New construction has never been required to promptly and completely mitigate CMR dangers.