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May 26, 2004

Mr. Thomas Grim, SWEIS Document Manager
Department of Energy/NNSA
Livermore Site Office, L-293,
7000 East Avenue
Livermore, CA 94550-9234

Fax: (925) 422-1776
Email: tom.grim@oak.doe.gov

RE: Comments on the Department of Energy's Draft Site-Wide and Supplemental Programmatic Environmental Impact Statement (SW/SPEIS) for Continued Operation of the Lawrence Livermore National Laboratory (LLNL).

Dear Mr. Grim:

1/31.04 By submitting these written comments, we are informing NNSA and the Department of Energy of the existence of serious deficiencies in the above named draft combined SW/SPEIS. If not rectified by the Department, these deficiencies could result in litigation under National Environmental Policy Act (NEPA) to compel both immediate suspension of certain activities that appear to be proceeding in violation of NEPA, and the preparation of separate and substantially revised draft SWEIS and SPEIS documents for public review and comment.

**I. By secretly resuming an AVLIS program for nuclear weapons materials that was terminated 14 years ago, without first preparing, circulating for public comment, and finalizing a timely Supplemental PEIS, DOE has violated NEPA.**

2/01.01, 27.01, 27.02, 27.03, 31.05 The draft SW/SPEIS states (at Appendix N-1) that sometime "in 2000," NNSA's predecessor, the DOE Office of Defense Programs (DP) "determined that there was a need for augmentation of the current inventory of special nuclear materials (e.g., plutonium, enriched uranium) to support the Stockpile Stewardship certification activities. DP directed that the Atomic Vapor Laser Isotope Separation (AVLIS) capabilities be made available for use and the AVLIS facilities be maintained in a state of readiness." The document then goes on to disclose, *for the first time*, that as long ago as May 5, 2000, Lawrence Livermore National Laboratory (LLNL) responded to DP's direction "with a proposal for the development of a low-level AVLIS effort….known as the *Advanced Material Program* (AMP)…to develop and retain the necessary AVLIS equipment and skill set through a series of enrichment demonstrations of the technology."

According to Appendix N, the AMP utilizes facilities and technology originally developed at LLNL in the 1980's – known then as the "Engineering Demonstration System (EDS)" -- for a large scale plutonium AVLIS plant planned for construction in Idaho – known as the Special Isotope Separation (SIS) Plant – to purify fuel-grade plutonium for use in weapons. But the Cold War, the nuclear arms buildup, and the

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Soviet Union itself ended in the period 1989-91, whereupon the putative "need" for additional plutonium for nuclear weapons disappeared.

Facing a tidal wave of weapons retirements, the Department declared itself to be "awash in plutonium," and in 1990 the Secretary of Energy cancelled construction of the SIS plant. "The SIS Program at LLNL *was closed out* and the equipment was placed in standby, with the glovebox de-inventoried and the EDS cleaned of surrogate materials (emphasis added)." Appendix N at p. 4.

As far as members of Congress, the media, other state and federal agencies, and the interested public were concerned, the plutonium AVLIS program at Livermore ended in 1990. When DOE subsequently adopted a comprehensive new strategy and program -- called "science-based Stockpile Stewardship" -- for maintaining the safety and reliability of nuclear weapons in the post-Cold War era without nuclear testing, there was no analysis, nor even a mention, in the September 1996 Stockpile Stewardship and Management PEIS of a potential need to revive the plutonium AVLIS capability at Livermore. Yet this is the very document that NNSA now purports to "supplement" with the *ex post facto* site-specific analysis in Appendix N.

2/01.01, 27.01, 27.02, 27.03, 31.05 cont. In connection with DOE's "determination," some time between January and May 2000, of a purported agency need for more plutonium and other "special nuclear materials," we note that this determination was made in secret, and that it falls entirely outside the scope of the Stockpile Stewardship and Management Program analyzed in the Stockpile Stewardship and Management PEIS, and implemented in the Record of Decision (ROD) dated published December 26. 1996. Likewise, the secret DOE/DP "directive" in 2000, to refurbish, modernize, and restart the EDS under the new moniker "Advanced Material Program," is not covered by the analysis contained in the 1996 PEIS, nor was it included in the subsequent Record of Decision (ROD) implementing the proposed actions in that PEIS.

In other words, after a hiatus of more than a decade, and without supplementing the existing NEPA programmatic analysis for the Stockpile Stewardship and Management Program, the Department has secretly engaged in a restart of its plutonium AVLIS "Special Isotope Separation" (SIS) program for weapons purposes. The programmatic actions already undertaken, as well as those proposed in the draft SWEIS, clearly have impacts well beyond the Livermore site, and therefore the belated discussion of a subset of these impacts, relegated to an appendix in a particular site-wide EIS, does not meet the requirements of NEPA for timely analysis of programmatic impacts in the proposal stage, *before* an agency undertakes implementing steps that could prejudice subsequent decision-making.

By secretly ordering a resumption of its previously terminated AVLIS program for nuclear weapons materials without first preparing, circulating for public comment, and finalizing a timely Supplemental PEIS, DOE has violated NEPA.

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The Department's attempt to paper over this violation has led to another: a technically and legally unsupportable attempt to artificially segment the analysis of the plutonium AVLIS restart program into separate phases. The first, involving modernization of the mothballed Engineering Demonstration System (EDS) with new pump lasers and its operation using "surrogate materials" and "limited plutonium quantities;" is treated as a *fait d'accompli* via inclusion in the NEPA "No Action Alternative." Described as having begun in FY 01, this phase of the restart effort will run through FY 07 and is arbitrarily and capriciously designated the "Advanced Material Program. We are told, "the AMP at LLNL is a research and development project that began in 2001 to conduct a series of laser isotope separation demonstrations on surrogate materials and, on a limited basis, plutonium utilizing modern laser hardware." Appendix N at 8.

2/01.01, 27.01, 27.02, 27.03, 31.05 cont.

In the second phase, apparently beginning in FY 08, the former EDS facility and "equipment developed [by the AMP] under the No Action Alternative would be used to process sufficient amounts of material as required by the broader SBSSMP [Science-Based Stockpile Stewardship and Management Program]." This phase is arbitrarily and capriciously designated the "Integrated Technology Project," and is included as part of the Proposed Action analyzed in the LLNL-SWEIS.

The artificial and arbitrary character of this division is evidenced by the fact that if one reverses the names of the two program phases or stages, equally accurate appellations result: i.e. "Advanced Material Program," the name given to the already ongoing (illegal) actvity, more aptly describes the second phase under the Proposed Action, which is focused on the processing of significant quantities of plutonium and possibly other materials useful in nuclear weapons research, while "Integrated Technology Project," the moniker now given to the Proposed Action, could just as easily describe the technology development activities begun in 2001 with the goal of integrating improved solid state laser technologies into the former Engineering Demonstration System.

Our point is not to make the case that one ordering of the names is better than the other, but only to show that NNSA's entire NEPA construct for resurrecting its Pu-AVLIS program is artificial, arbitrary and capricious, and designed to subvert the purposes and requirements of NEPA.

In support of the approach taken in the SWEIS toward secret resumption of its discontinued plutonium AVLIS program, the Department cites three documents:

- a 14 year old Environmental Assessment entitled *Resumption of Surrogate Testing in the Engineering Demonstration System at the Lawrence Livermore National Laboratory* (DOE/EA-0421, April 1990) and subsequent Finding of No Significant Impact, or FONSI, (June 11, 1990);
- a five year old *Supplemental Analysis for Continued Operation of Lawrence Livermore National Laboratory and Sandia National Laboratory* (DOE/EIS-0157-SA-01, Oakland Operations Office, March 1999) that predates the DOE/DP determination of the need to revive the Pu-AVLIS program, and makes no reference to it; and

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- a two-year old DOE *National Environmental Policy Act Review of the Advanced Materials Program (AMP), Buildings 161, 332, and 335* (DOE Oakland Operations Office, June 20, 2002) that we strongly suspect may be a brief "categorical exclusion" from further NEPA analysis, but which has been withheld to date from public reading room review or release under FOIA on the grounds that it contains "Unclassified Controlled Nuclear Information (UCNI)."

Let us consider each of these in turn. The outdated 14 year old environmental assessment and FONSI for a long ago terminated Pu-AVLIS program—prepared in support of nuclear weapons program that has since undergone radical programmatic changes—explicitly supported *only* the resumption of tests using surrogate materials, and further pledged that *"any* proposed plutonium operations associated with the EDS would require preparation of an EIS and issuance of a Record of Decision." Appendix N at 4. This document therefore cannot possibly be relied upon to fulfill NEPA review requirements for a substantially *upgraded* and *modified* EDS, performing a *different mission* in support of a substantially *different overall program*, which *will process* "4 kilograms of plutonium per year" under the Department's purported status-quo alternative of the "No Action" Advanced Material Program. Appendix N at 13.

2/01.01, 27.01, 27.02, 27.03, 31.05 cont.

As noted, the second document does not even refer to the Pu-AVLIS Program, and after all, how could it, when the project had been terminated nine years before and had not been proposed for resumption in the immediately preceding and still operative September 1996 PEIS, or included in the December 1996 ROD implementing a new Stockpile Stewardship and Management Program.

As for the third document, it is difficult to evaluate since it has been withheld from public review, despite the Department's determination, after completing the public scoping phase of the SWEIS, that continued classification of the restart of its Pu-AVLIS program was no longer required, allowing discussion in an unclassified appendix to the draft SWEIS. Summary at 15. However, we strongly suspect that the document in question is probably a "categorical exclusion" or similar bureaucratic device to exempt the ongoing research and demonstration phase of the secretly revived AVLIS program from further NEPA analysis.

This is a shoddy, evasive, and grossly incomplete administrative record for decision-making that we submit cannot withstand scrutiny by any fair-minded Court. The Department cannot even make up its mind whether or not it has actually established a Purpose and Need for the Proposed Action. On the one hand, under the heading "Purpose and Need For Agency Action," the draft SW/SPEIS states, "In 2000, the Office of Defense Programs (DP) *determined that there was a need for augmentation of the current inventory of special nuclear materials* (e.g., plutonium, enriched uranium) to support the Stockpile Stewardship certification activities. *DP directed* that the Atomic Vapor Laser Isotope Separation (AVLIS) capabilities *be made available for use* and the AVLIS facilities *be maintained in a state of readiness* (emphasis added)."

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We are told that Livermore "responded" to this "direction" by "proposing" an Advanced Material Program "to develop and retain the necessary AVLIS equipment and skill set through a series of enrichment demonstrations of the technology." Appendix N at 1.

However, in its description of the Proposed Action relating to the Pu-AVLIS facilities, the draft SW/SPEIS states: "Any decision to proceed with the Proposed Action is subject to the successful performance of the AMP demonstration *and a determination of Program need*." Appendix N at 13. But this contradicts the earlier statement that the need for additional special nuclear materials had been "determined" back in 2000, and that DP's secret program direction based on this determination had resulted in the current Pu-AVLIS development and demonstration program included in the No Action Alternative.

2/01.01, 27.01, 27.02, 27.03, 31.05 cont.

Such conceptual and rhetorical confusion only underscores the fact that *there was and is in reality a single DOE Pu-AVLIS program,* the overall purpose of which was and is to restore Pu-AVLIS capability at the Livermore site, in order to supply particular plutonium and possibly other isotopes to support NNSA weapons development, testing, and computer simulation efforts. These are conducted not only at LLNL, but also at NTS, Los Alamos, and other sites throughout the complex, and thus the resumption of Livermore's Pu-AVLIS program has potential impacts that extend far beyond Livermore. The relative abundance and availability of Pu-242, for example, could have a significant and even dramatic effects on the type of testing activities and projects undertaken at NTS and Los Alamos in future years.

The nuclear materials produced will be utilized in both below- ground and above- ground contained nuclear experiments at NTS and Los Alamos, and the wastes from Pu-AVLIS operations cannot and should not be stored indefinitely within the highly confined and congested LLNL main site within the city of Livermore.

Moreover, the resumption of Pu-AVLIS operations at LLNL could and most likely will undermine US and international efforts to contain the spread of plutonium enrichment technologies that have an inherent capacity for clandestine use in secret or undeclared foreign programs to develop nuclear weapons. In short, the ongoing resumption of a Pu-AVLIS program at Livermore, after a hiatus of 14 years, has broad but as yet unexamined programmatic environmental impacts that demand analysis in a comprehensive and timely Supplemental PEIS.

3/08.01, 31.01

**II. The three generic *pro forma* alternatives examined in the SW/SPEIS do not begin to encompass the full range of reasonable alternatives for future operation of LLNL, as required by law.**

In 1989, the year the Berlin Wall came tumbling down, DOE's budget for nuclear weapons activities was $4.25 billion (about $5.5 billion in today's dollars), LLNL's piece of that budget was about $570 million or 13.5 %, which is about $750 million in today's money.

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Employment at LLNL stood at 8200 full-time equivalents (FTE's), 49% of whom were supported by DOE's nuclear weapons research, development, and testing program. Another 20% were supported by the DOE Defense Program's classified, weapons-related laser fusion effort, or performed so-called "reimbursable" research for the Strategic Defense Initiative (SDI) and other Department of Defense Programs. That brought the weapons-related employment to 5,740 FTE's, or about 70% of total lab employment.

The Atomic Vapor Laser Isotope Separation (AVLIS) Program and its classified offshoot, the "Special" (i.e. plutonium) Isotope Separation (SIS) project, employed another 1000 FTE's, and the remainder was spread among a smattering of small energy, general science, and biomedical research efforts.

Today, 15 years later, the Berlin Wall has disappeared. So has the Evil Empire of Soviet Communism that built it. So has the Warsaw Pact that defended it. So have tens of thousands of deployed U.S. and Russian nuclear warheads, including the bulk of their tactical nuclear arsenals. But inexplicably, without rhyme or reason, the DOE budget request for nuclear weapons activities now stands at $6.81 billion (included allocated administrative overhead costs), far above the Cold War average support level of $4.2 billion (in current FY 04 dollars). LLNL's piece is a little under $1 billion or 14%, above where it was when the Wall came down, Livermore's employment stands at 10,600 personnel, 30% above the 1989 level, and the plutonium AVLIS project has been secretly, and in our view, *illegally* revived.

3/08.01, 31.01 cont.

In light of the historical background noted above, it is clear that some of the fundamental premises of the current document are simply invalid. For example, the SEIS states:

"The nuclear weapons stewardship goal is to ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile. *Achieving these goals requires the continued operation of LLNL.*" (Draft SWEIS/PEIS, p. S-2)

As a factual matter, the highlighted statement is simply not true. LLNL could be crippled tomorrow by a major earthquake – a not-so-incredible event, by the way – and the United States would still be left with a very robust nuclear deterrent, for the following reasons:

- LLNL-designed nuclear weapons – the W62 and W87 intercontinental ballistic missile warheads, the W84 cruise missile warhead, and the B83 bomb *currently* account for only 20% of the total US "war reserve" stockpile of nuclear weapons, and by 2009 this fraction is likely to sink further, to around 15%.
- The approximately 400 W84 warheads supported by LLNL have no delivery system – all Ground Launched Cruise Missiles (GLCMs) were eliminated under the terms of the 1987 INF Treaty – and are not maintained as part of the "active" nuclear weapons stockpile.

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- Implementation of the "operationally deployed" strategic force reductions agreed to in the 2002 Moscow Treaty on Strategic Offensive Reductions (SORT) will result in the retirement of all 600 remaining W62 warheads from the stockpile by 2009.
- Within the 10 year period covered by this document, LLNL will have only two warheads types – the W87 and the B83, remaining in the stockpile: the W87 is finishing a major multi-year "Life Extension" program this year (FY 2004), and renovation of some 650 B83 strategic bombs is not planned within the next five years.
- NNSA is pushing advanced development of a "robust" earth penetrating variant of the B83 megaton-range bomb that a near majority in Congress ( 204-214 in a recent House vote) oppose. One wonders whether the pressure to pursue this project is partly to give LLNL's redundant nuclear weaponeers something to do.

3/08.01, 31.01 cont.

In sum, over the next five years LLNL will have little bona-fide workload relating to the support of its 1200 actively deployed weapons in the U.S. nuclear stockpile, creating a clear window of opportunity to restructure and consolidate nuclear weapon stockpile support functions at Los Alamos and Sandia Albuquerque national laboratories. (Sandia has always had, and continues to have, the primary responsibility for monitoring and maintaining the performance of the deployed nuclear stockpile.) Clearly, it makes no sense to maintain a separate $1 billion per year NNSA weapons program at LLNL to support a mere 15% of US stockpile warheads.

A few years ago, recognizing that LLNL was doing little for the weapons program other than continuing to hemorrhage billions of dollars on construction of the National Ignition Facility, NNSA failed to make the rational choice -- phasing out LLNL's residual stockpile support responsibilities -- and instead decided to "redistribute" the stockpile support workload [i.e. give Livermore something to do] by transferring responsibility for the W80 cruise missile warhead, a Los Alamos design, from LANL to LLNL!

Against the background of the seismic shift that has occurred over the last 15 years in the external political environment, including the dramatic reductions in the number and types of nuclear weapons requiring continuing support by the weapons laboratories, and the lack of validated requirements for new nuclear weapons, it defies all logic, reason, and legal standards of "reasonableness" for the Department to insist, as it does in this draft SW/SPEIS, that the only alternatives for future operation of LLNL consist solely of greater, and minor lesser deviations from the current program.

Logic and reason loudly proclaim that there must be reasonable alternatives for supporting a nuclear deterrent that do not require sustaining the level of weapons laboratory operations and programs that characterized the Cold War, and there are such alternatives. Only you won't find them considered as "Reasonable Alternatives" for detailed analysis in this Draft SW/SPEIS. The two alternatives to the "Proposed Action" deemed worthy of comparative analysis – "No Action" (i.e. continue the status quo are proceed with projects already planned and approved for construction) and "Reduced Operation" -- do not begin to represent a good faith examination of the range of reasonable alternatives, as required by law.

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3/08.01, 31.01 cont.

In fact, the purported "Reduced Operations Alternative" is not really an alternative in any meaningful sense: in 50 out of some 80 categories used for environmental comparison between the three alternatives, the impacts of the "Reduced Operation Alternative" are characterized as "Same As No Action." Table. S.6-1, Comparison of Environmental Impacts and Parameters Among Baseline, No Action, Proposed Action, and Reduced Operation Alternatives, p.S-29. In most of the remaining categories, the differences range from slight to negligible, as shown in Table A below.

**TABLE A: A "Reasonable Range" of Alternatives for LLNL?**

| | "Environmental Baseline (2002)" | "No Action Alternative" | "Proposed Action" | "Reduced Operation" | Variability (%) from Baseline |
|---|---|---|---|---|---|
| Employment | | | | | |
| Livermore site | 10, 360 | 10, 650 | 11, 150 | 9,770 | - 5.7 to + 7.6 |
| Site 300 | 240 | 250 | 250 | 230 | - 4.2 to + 4.2 |
| Non-hazardous Solid Waste | 4,500 mt/yr | 4,600mt/yr | 4,900 mt/yr | 4,200 mt/yr | - 6.7 to + 8.9 |
| Hazardous & Radioactive Waste Shipments (no.) | 88 | 240 | 310 | 200 | + 127 to 252 |
| Sanitary Waste Shipments | 518 | 534 | 570 | 492 | - 5 to + 10 |
| Number of Material shipments (radioactive, chemical, & explosives) | 470 | 540 | 600 | 550 | +15 to 28 |
| Hazardous Waste from Routine Operations | 440 metric tons/yr | 390 mt/yr | 510 mt/yr | 300 mt/yr | - 32 to + 16 |
| Wastewater | 300,000 gal/day | 310,000 gal/day | 330,000 gal/day | 290,000 gal/day | - 3.3 to + 10 |
| Annual Electricity Use | 321 M kWh | 446 M kWh | 442 M kWh | 371 M kWh | + 15.6 to 39 |

3/08.01, 31.01 cont.

Note that the level of lab employment for the "Reduced Operations" Alternative, -- 10,000 employees – is actually higher than it was in 1989, during the last year of the Cold War!

In other words, these so-called "alternatives" are sham constructs, which do not begin to reflect a reasonable range of alternatives for LLNL's future role in supporting the missions of the Department of Energy. In fact, three of the Department's most important missions, Nonproliferation, Homeland Security, and Energy Research, are given short shrift in the "Statement of Purpose and Need" that is supposed to underlie the agency's Proposed Action, even though prominent, responsible, and reasonable senior expert observers, with decades of government experience, have argued that *these missions are now more important to US national security today than rebuilding or developing nuclear weapons.*

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But nowhere in this document will you find alternatives that are premised on a future concentration *on theseDOE missions*, accompanied by a partial contraction of the nuclear weapons effort. The mere fact that NNSA itself, as a bureaucratic entity, does not *prefer* such alternatives, or finds them distasteful in light of its own internal goals and objectives, does not absolve DOE from the responsibility under NEPA to consider *the full range* of alternatives that are *objectively reasonable from a technical, environmental, and economic standpoint*, quite apart from the agency's own internal preferences. Indeed, such consideration constitutes the heart and soul of NEPA's ability to identify environmentally preferable alternatives for attaining the government's purpose and need for a proposed major federal action.

Moreover, vigorous pursuit of some NNSA-LLNL objectives described in the draft SW/SPEIS could actually undermine or obstruct the achievement of DOE's very important missions outside of nuclear weapons, and these tradeoffs need to be evaluated in the context of assessing reasonable alternatives for LLNL's future operations.

3/08.01, 31.01 cont.

In 1995, the Department's own Advisory Board *Task Force on Alternative Futures for the Department of Energy National Laboratories* (the "Galvin Commission," so named after the retired chairman of Motorola, John Galvin, who chaired the Task Force) recommended a "restructuring of weapon design capabilities" among the three nuclear weapons laboratories, noting that the restructuring would affect "primarily weapons design capabilities, where the largest functional redundancy exists, and specifically Lawrence Livermore National Laboratory."

The Galvin Commission cautiously recommended, in light of the revised U.S. nuclear posture, including planned reductions to a "a required stockpile of around 5000 weapons" by 2003, -- half its current size – that LLNL should "transfer, as cost-efficiency allows, over the next five years [i.e. by the year 2000] its activities in nuclear materials development and production to the other design laboratory." The proposed restructuring would also have included transfer of LLNL's "direct stockpile support" [of weapons] to the other weapons laboratories."

This recommendation is no less "reasonable," in objective NEPA terms, than it was in 1995. In fact, it is more so. While nuclear forces have continued on a downward trajectory, this has been accompanied by the anomalous restoration and expansion of redundant nuclear weapons capabilities at Livermore, duplicating similar capabilities at Los Alamos, Sandia, and NTS – in some cases resulting in weapons research and development capabilities *in triplicate*.

For example, in this draft document, NNSA proposes to modernize and significantly expand LLNL's plutonium processing, inventories, and pit fabrication operations, upgrade and expand tritium operations, and build brand new centers for High Explosives Development and "Energetic Materials Processing" at Site 300. All these capabilities already exist in some form at one or more DOE sites.

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Los Alamos National Laboratory is already well along in a $2.5 billion modernization of its plutonium chemistry and pit fabrication facilities, and already has extensive facilities for tritium research and target loading. Both Pantex and Los Alamos already have facilities for formulating weapons high explosives. LLNL's Site 300 flash radiography facilities duplicate those available at Los Alamos and NTS.

Moreover, the Livermore site, hemmed in by suburbs, with hazardous activities densely packed within a 1.3 square mile area that is highly vulnerable to external attack, is hardly the most appropriate place in the complex for storing and processing nuclear or chemical explosive materials.

And in an age when "the network is the computer," perhaps the most egregious example of extravagant redundancy is the recent construction of dedicated nuclear weapons supercomputing centers at all three laboratories, at an average cost, by 2009, of some $2.92 billion *per laboratory* to equip each with state-of-the-art weapons simulation capabilities.

3/08.01, 31.01 cont.

By pointing out the extravagant redundancies that exist and are even growing within today's gold-plated "stewardship" complex, we do not mean to suggest that Livermore should bear the full or exclusive burden of any consolidation of complex capabilities, but rather that some overall rationalization is urgently needed to reduce the environmental footprint of the complex, reduce costs, free resources for more important defense tasks and deficit reduction, and present a more reasonable face to the rest of the world.

For example, LLNL has long demonstrated, and is continuing to demonstrate, a comparative advantage over Los Alamos in weapons computing and software development. In a rationalized and restructured complex, shorn of its most egregious redundancies, it could well make sense for Livermore to be assigned the lead laboratory role in supercomputing, and to retain sufficient weapons design competence and "technology base" to continue activities in non-proliferation, nuclear materials detection, homeland security, intelligence support, and verification, *while phasing-out or transferring to other sites its weapons plutonium, uranium, tritium, high explosive operations, radiographic hydrotest, and warhead stockpile support functions*. This is a reasonable alternative that is entirely omitted from the draft SWEIS/PEIS, but would result in a significant reduction in environmental risks and impacts from future operation of LLNL.

This omission is made even more salient by the fact that on April 27, 2004, while public hearings on the draft SWEIS were being conducted in California, the Congressional Subcommittee on National Security, Emerging Threats, and International Relations of the Committee on Government Reform was meeting in Washington to receive testimony on the security of nuclear materials. The hearing highlighted potentially insurmountable problems with plutonium and highly enriched uranium at certain Department of Energy (DOE) sites, with a focus on the vulnerability of nuclear materials storage at LLNL.

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On May 7, 2004, Energy Secretary Spencer Abraham delivered a speech on the future of security forces and systems protecting the DOE complex. The Secretary stated that he had previously told the Congress he would conduct a review of the requirements for the weapons complex over the next 20 years that he expected would be completed "early next year (i.e. 2005)." The study will examine, *inter alia*, "the opportunities for consolidation [of sites storing nuclear weapons materials]," including "*whether essential work performed at Livermore could be relocated to allow us to remove the Category I and II [Special Nuclear] material stored there* (emphasis added)." Spencer Abraham, Remarks at the 32nd Security Police Officer Training Competition, May 07, 2004, www.energy.gov/pressroom/speeches.

3/08.01, 31.01 cont.

The fact that the senior leadership of DOE is itself studying and evaluating the removal from Livermore of activities involving the storage and use of nuclear weapons materials makes it unavoidable and imperative that the SWEIS evaluate an alternative that would remove all special nuclear materials from LLNL. Indeed, the DOE is now clearly obligated as a matter of law to conduct a detailed examination of this alternative in the SW/SPEIS, since the cognizant agency is itself studying this alternative, and an agency is obligated to evaluate in an EIS reasonable alternatives having lesser as well as greater environmental impacts.

It is utterly impermissible to dismiss detailed analysis of such a lesser-impact alternative on the grounds that its impacts are subsumed in some larger, worst-case bounding analysis. The reduced risks and impacts and environmental benefits of this and other alternatives, representing the full range of reasonable alternatives, must be separately characterized and quantified, to enable fully-informed comparisons between alternatives by non-specialist policymakers and citizens. The current draft document utterly fails to meet this standard.

4/26.02

**III. By failing to prepare a timely and adequate Supplemental PEIS analyzing the Proposed Use of Hazardous Materials in NIF Experiments, the Department is in violation of Paragraph 6 of the Memorandum Opinion and Order dismissing *NRDC v. Pena*, Civ. No. 97-936 (SS) (D.D.C).**

Paragraph 6 of the above named *Memorandum Opinion and Order* required DOE, "not later than January 1, 2004:" to (1) determine whether any or all experiments using plutonium, other fissile materials, fissionable materials other than depleted uranium, lithium hydride, or a Neutron Multiplying Assembly shall be conducted in the NIF; or (2) prepare a supplemental SSM PEIS "in accordance with DOE National Environmental Policy Act (NEPA) regulation 10 CFR §1020.314 analyzing the reasonably foreseeable environmental impact of such experiments." The Court further provided, "If DOE undertakes the action described in subpart (2) of this paragraph, DOE shall complete and issue the Supplemental SSM PEIS and the Record of Decision based thereon within eighteen (18) months after issuing a notice of intent to prepare the Supplemental SSM PEIS.

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We note that the Department is now in violation of this Order in at least three respects:

- Compliance with Paragraph (1) required either a decision to reject these experiments or a ROD to conduct them "not later than January 1, 2004." DOE is in obvious violation of this requirement, and will likely remain so more several more months, if not longer.
- In the event that the Department formulated a proposal to pursue any or all of these experiments, Paragraph (2) required a finalized Supplemental SSM PEIS and a Record of Decision "within 18 months" of issuing a Notice of Intent to prepare the document.. The Department is already six months late, and may ultimately be many more months late, in complying with this requirement, depending on the final outcome of the LLNL-SWEIS.
- And Paragraph (2) required both a Notice of Intent to prepare a Supplemental *Stockpile Stewardship and Management* PEIS and the timely completion and issuance of such a document. The Department to our knowledge never issued a definitive Notice of Intent to Prepare a Supplemental SSM PEIS regarding these experiments, and instead issued a kind of conditional NOI as part of a June 17, 2002 Federal Register NOI to prepare the Livermore SWEIS. In the event, the Department did not prepare a separate Supplemental SSM *Programmatic* Environmental Impact Statement, as the Court directed, but merely a tardy appendix to an ongoing SWEIS, a step that was neither envisioned nor sanctioned by the Court's order.

4/26.02 cont.

One obvious effect of the Department's noncompliance has been the preparation of a draft that *does not discuss any reasonable programmatic alternatives for satisfying the NNSA's purpose and need in proposing NIF experiments with such hazardous materials.* This omission is doubly egregious as this very issue was the subject of extensive prior litigation, resulting in the aforementioned court order.

From the stakeholder's perspective, it appears that DOE first denied the existence of proposals circulating within Defense Programs (now NNSA) and its weapons laboratories advocating the conduct of such experiments, with the clear intent of precluding discussion of such experiments in the December 1996 Stockpile Stewardship and Management PEIS. Despite copious documentation of plans and proposals to conduct such experiments presented to the Court, DOE continued publicly to disavow any such intention, with the obvious intent of avoiding the negative publicity that would attend a forthright and candid discussion of its real plans.

For example, as late as January 15, 2002, the Department stated in a Federal Register Notice (67 FR 1969) "…at the present time there are no DOE proposals to use any of these materials in experiments in the NIF." Six months later, in the June 17, 2002 Notice of Intent to prepare the Livermore Site-Wide EIS, the Department's position had evolved: it now had in place "a process to determine whether or not to propose the use of any of these materials in NIF experiments…If DOE were to decide to propose the use of any of these materials in the NIF, a NEPA analysis and determination would be undertaken as a project specific analysis to be included in the SWEIS." Fed. Reg./Vol.67, No.116/June 17, 2002 at 41226

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A "NEPA analysis"? A "project specific analysis to be included in the SWEIS"? The District August 1998 Court's order clearly required notice and preparation of a "Supplemental Programmatic Environmental Impact Statement."

The Department's ( or perhaps NNSA's) utter bad faith on this question is revealed by the fact that as early as April 6, 2001, in a Memorandum sent to Congress *certifying* the viability of a "rebaselined" NIF Project following a $1.3 billion cost overrun, Brig. General Thomas F Gioconda, the Acting Administrator for Defense Programs unequivocally stated (at p. 7):

> NIF is being built to achieve the goal of demonstrating inertial confinement fusion (ignition) in the laboratory. Specific regimes and capabilities *required* include: high temperature opacity of *weapons materials*; high pressure equations of state for *weapons materials*; x-ray radiation sources for *weapons effects*; complex, compressible hydrodynamics and *mixing* [this phrase typically refers to the interface between plutonium and deuterium-tritium gas in the first stage of a nuclear explosion] and thermonuclear ignition (emphasis added).

4/26.02 cont.

Compare the previous statement with the now official statement, *three years later*, of "Purpose and Need for the Use of Proposed Materials in the National Ignition Facility" contained in the draft SWEIS (Appendix M at p.8-10). The similarity is unmistakable.

> There is a need to perform experiments on the NIF with plutonium or enriched uranium without ignition. These experiments are generally designed to study the *equation of state of these [weapon] materials.*
>
> Experiments will be conducted on NIF to examine the growth and control of hydrodynamic instabilities, which are important both in making inertial confinement fusion targets ignite and burn, and in making nuclear weapons perform reliably. Hydrodynamic instabilities ultimately lead to *mixing of some quantity of one* [weapon] *material with another.*
>
> There is a need to perform experiments on the NIF with lithium hydride… These are *materials physics and equation of state experiments* designed to address fundamental physical behavior [e.g. opacity, a measure of resistance to radiation flow at different temperatures] of this material and to allow benchmarking of physical models of this material.

The record, unfortunately, reveals that the Department's failure to comply with the District Court's order has been willful and deliberate, the product of its strategy to deny to the public, for as long as possible, a correct appreciation of DOE's longstanding plans to use nuclear weapon materials in the NIF as a pathway to enhancing nuclear weapons research and development in the absence of underground testing. This entire issue should have been analyzed and discussed in the original 1996 PEIS, or failing that, in a timely Supplemental PEIS as directed by the Court.

We will be contacting the Department in the near future to discuss possible remedies for the Department's evasion of its NEPA obligations and its ongoing violations of the District Court's 1998 Order.

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2/01.01, 27.01, 27.02, 27.03, 31.05 cont.

In the meantime, in the context of these comments on the draft SWEIS, we urge that the following steps be undertaken immediately:

(1) Suspend work on the LLNL "Advanced Material Program" until such time as a proper Supplemental PEIS can be prepared, circulated for public comment, revised and issued in final form, and incorporated in a formal Record of Decision (ROD) on whether or not to proceed with the restart of DOE's Plutonium AVLIS program at LLNL. The obvious "segmentation" that characterizes DOE's current NEPA evasion strategy is simply unacceptable.

4/26.02 cont.

(2) Prepare a proper Supplemental PEIS on the use of fissile and other hazardous materials in the NIF, as required by the District Court Order, analyzing a range of reasonable programmatic alternatives to such use, and their reasonably foreseeable consequences, including impacts on nuclear weapons proliferation if fissile material use is allowed to become a routine part of global ICF research,.

3/08.01, 31.01 cont.

(3) Suspend the process of revising and finalizing the current grossly inadequate draft LLNL SWEIS, and: prepare a new representative set of reasonable future operation alternatives that clear the threshold for acceptable NEPA analysis, including fissile material consolidation alternatives now under study elsewhere in the Department, and contamination risk scenarios that reflect post 9/11 threat levels; revise the current draft SWEIS accordingly to incorporate detailed analysis of these alternatives, and relevant data developed in the Pu-AVLIS and NIF Supplemental PEIS documents; and circulate the revised draft for public review and comment.

By separate communication, NRDC is submitting detailed technical comments regarding the inadequate SWEIS analysis of the risk of radioactive contamination from a plutonium fire and breach of containment in the LLNL Superblock.

We look forward to amicably and expeditiously resolving these matters with the Department at the earliest opportunity, preferably without resorting to litigation, and urge that serious and prompt consideration be given to these comments.

I further suggest that you immediately forward a copy of these comments to Dr. Everet Beckner, NNSA Deputy Administrator for Defense Programs. I do not have his email address or fax readily at hand, and the comment filing deadline looms. If he would like to discuss this matter, I can be reached at 434-244-5013 or at chrispaine@earthlink.net.

Sincerely,

Christopher E. Paine
Senior Nuclear Program Analyst
Natural Resources Defense Council