COMMENT OF THE WESTERN STATES LEGAL FOUNDATION
AND THE LAWYERS COMMITTEE FOR NUCLEAR POLICY
TO THE DRAFT SITE-WIDE ENVIRONMENTAL IMPACT STATEMENT (SWEIS)
FOR CONTINUED OPERATION OF
LAWRENCE LIVERMORE NATIONAL LABORATORY

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Re: **DRAFT LLNL SW/SPEIS COMMENTS**
DOE/EIS-0348 and DOE/EIS-0236-S3

Thank you for the opportunity to comment on the Draft LLNL Site-Wide Environmental Impact Statement (SWEIS). This comment is submitted on behalf of the Western States Legal Foundation (WSLF), a nonprofit foundation based in Oakland, California,which has been active

in environmental and disarmament issues for over twenty years, Lawyers Committee For Nuclear Policy (LCNP), headquartered in New York City, a nonprofit organization

WSLF has participated in numberous NEPA and CEQA proceedings involving LLNL activities, including the 1987 EIR prepared on behalf of the Regents of the University of California, and the 1992 SWEIS/EIR. The latter document was the product of a settlement of a lawsuit filed by WSLF on behalf of Tri Valley Communities Against a Radioactive Environment challenging the 1987 EIR.

This comment departs from prior comments in that it is not intended to "flyspeck" technical inadequacies in the EIS. Instead, the comment draws upon twenty years of experience in monitoring and reviewing activities at LLNL to address global issues of environmental documentation and review, and the broader conflict between NEPA policies and the ongoing expansion of weapons-related facilities at LLNL.

Background to the Present SWEIS: The Problem of Timing

DOE's NEPA guidelines require that site-wide documentation be prepared "at least" every five years:

> "Sec. 1021.330 Programmatic (including Site-wide) NEPA documents
> ...
> (d) DOE shall evaluate site wide NEPA documents prepared under Sec.1021.330(c) at least every five years. DOE shall evaluate site-wide EISs by means of a Supplement Analysis, as provided in Sec. 1021.314. Based on the Supplement Analysis, DOE shall determine whether the existing EIS remains adequate or whether to prepare a new site-wide EIS or supplement the existing EIS, as appropriate.

The supplement to the 1982 SWEIS/EIR was in 1997. The authors of the SWEIS provide an inadequate explanation for waiting an addition two years to prepare the current document, or for that matter the general timing of the SWEIS, which, in a departure from past reviews, appears detached from any particular central event or program. The SWEIS summary describes a number of new programs and decisions "in the pipeline" such as the plan to use transuranic materials in NIF, but there does not appear to be any documentation of a unitary, programmatic decision linking the various activities. (Such a programmatic decision, of course, would trigger the requirement of a programmatic EIS).

The two prior site-wide EIR/EIS documents were each tied to renewal of the LLNL management contract between the Regents of the University of California and the Department of Energy. The 1987 site-wide EIR appears to have been a purely in-house document prepared by LLNL staff with little or no input from the DOE. It studiously avoided any mention of ongoing programs and dealt only in general terms with prospective impacts. The resulting state court lawsuit (*Tri-Valley Cares, etc. v. Regents*) culminated in a settlement which committed LLNL to

prepare a new site-wide EIR in 1992 when the management contract was to again come up for renewal.

In 1992, the DOE and the Regents jointly issued the last site-wide LLNL EIS/EIR, during a time of reduced weapons development and somewhat increased civilian research under Secretary Hazel O'Leary. (The present SWEIS notably lacks any comparison between the level of activity described in the 1992 document with present LLNL programs. The comparison would be dramatic.) Despite enormous changes to LLNL's mission including NIF, various iterations of AVLIS, and development of stockpile stewardship programs, only a supplemental review was prepared for LLNL in 1997 to coincide with the last renewal of the UC management contract. Over twelve years have elapsed between the last site-wide EIS and the current SWEIS; as a consequence, numerous activities have escaped cumulative analysis.

Similarly, the last programmatic review of DOE weapons activities is out of date. In 1996, the DOE released a Programmatic Stockpile Stewardship and Management EIS which evaluated impacts associated with the evolving stockpile stewardship program initiated in the early 1990s. WSLF was a participant in the subsequent lawsuit *NRDC v. Pena*, which resulted in a settlement leading to the creation of a nationwide database and oversight fund.

The Federal Register Notice (69 FR 9311) for the LLNL SWEIS discloses no particular driver for the timing of the SWEIS other than a recognition that the 1992 EIS/EIR is obsolete. The SWEIS does not otherwise provide any rationale for existing or future timing of site-wide reviews, which is unfortunate. The absence of a reliable schedule for periodic review will inevitably discourage timely global review of programs before irrevocable commitments of resources are made, as in the case of BSL-3, which was the subject of an environmental assessment. The lack of reasonably current site-wide reviews also unfairly burdens state and local agencies (such as the Department of Toxic Substances Control) which must undertake major reviews (as in the case of LLNL's RCRA Part B permit) without the benefit of programmatic documentation, and lack the resources to perform such reviews themselves.

The final SWEIS should commit to a fixed schedule of revised EIS/EIR reviews, not greater than every five (5) years. These could be timed, as suggested by the 1987 and 1992 EIRs, to coincide with management contract bids or renewals.

<u>The Affected Environment</u>

The SWEIS contemplates significant mission changes that are already underway. Perhaps the most significant of the new programs is the BSL-3 laboratory which is intended to investigate biological weapon agents, including aerosolization of pathogens and biotoxins. Remarkably, LLNL limited environmental review of this facility to an Environmental Assessment (EA). Additionally, the increase in the permitted Pu limit at LLNL is to be $1.5*10^3$ kg.

The implications of both actions are more pronounced in an urban environment than in a

relatively undeveloped setting such as LANL. The evident risk of handling biotoxins and large quantities of plutonium in such a setting require, at a minium, a modicum of discussion about the interaction between such activities and existing land uses. The SWEIS merely engages in an overall survey of surrounding land uses (similar to a standard real estate appraisal) but makes little effort to evaluate population densities and potential future growth pattern. Unlike the laboratory itself, the surrounding population and land uses are expected to remain fairly static. These assumptions are contrary to historical growth patterns as described in general and regional plans (see, e.g. Alameda County and San Joaquin County General Plans).

Nearly all new projects that would propose such extraordinary land uses in close proximity to populated areas would, at a minimum, describe alternatives involving different siting scenarios. Without any effort to explain why these activities *must* be conducted at LLNL, the SWEIS fails to propose a single alternative site for the BSL-3 or the expanded plutonium activities described in the SWEIS.

Both alternative sites and comparisons to alternative programs could be carried out in a programmatic impact statement, which should have preceded the SWEIS. The need for a programmatic impact statement, particularly with regard to the Chemical and Biological National Security Program, is described in our comment to the BSL-3 EA submitted in 2003, and incorporated herein by reference.

<u>The Problem of Incomplete Knowledge vs. History</u>

The CEQA NEPA regulations list elements to be taken into account in determining whether an EIS is to be prepared. These include: (a) the degree to which the proposed action affects public health or safety, (b) the degree to which the effects on the quality of the human environment are likely to be highly controversial; and (c) the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks. See 40 CFR §1508.27.

Once an EIS is prepared, these considerations do not fly out the window. Lengthy exposure tables which give the appearance of scientific certainty are an improper substitute for a more extensive analysis of the *range* of risks and impacts from given activities. The SWEIS fails to acknowledge the tremendous uncertainties associated with any of the exposure risks estimated to occur from routine activities or non-routine accidents, especially if such materials enter densely populated communities.

The EIS provides an inadequate history of past excursions of hazardous materials, which lends a veneer of certainty to the EIS' assumption of 100% mitigation and minimal exposure patterns. Two major tritium events are known: approximately 350,000 curies were released in 1965 and another 300,000 curies were released in 1970. These have been the subject of studies by the Agency for Toxic Substances and Disease Registry (ATSDR), which yielded inconclusive results. (Russ & Goble, "A Critical Review of ATSDR Public Health Assessment For Lawrence

Livermore National Laboratory", March 28, 2003). The Health Consultation released by ATSDR in September 1993 was forced to rely upon mostly anecdotal data as well as conflicting studies of LLNL workers principally involving melanoma studies. Additionally, public health concerns still exist regarding the documented release of plutonium several decades ago into municipal waste sludge, which found transport into the local community by way of distribution of processed sludge as a garden soil amendment.

The SWEIS inappropriately isolates its analysis of impacts from this history. The validity of assumptions regarding risks and excursion pathways can only be evaluated in the context of past incidents, as well as conventional events involving hazardous wastes or failures in HEPA filtration systems (see, e.g., DNFSB Technical Report, "HEPA Filters Used in the Department of Energy's Hazardous Facilities," May 1999).

The Problem of Incremental Analysis: Alternatives

As with past attempts to evaluate the impacts of Laboratory operations (University of California Regents, 1987, DOE, 1992), comparison of impacts from different "alternatives" is frustrated by the fact that unlike a new project or development, the SWEIS addresses a fifty-year old facility. The SWEIS "baseline" is premised upon the Laboratory's robust operations in 2002, so that the three alternatives - "reduced operations", "no action", and the "preferred alternative" are incremental variations of one another, since the vast majority of programs and facilities at LLNL were constructed long ago and are in full operation, and LLNL has accumulated a significant volume of "legacy" waste. This fact underscores the ever-expanding quality and quantity of land uses such as hazardous and radioactive waste storage, expansion of materials limits, and construction of biological agent laboratories, which are patently inconsistent with the immediate land uses in nearly every direction from LLNL. The SWEIS also contemplates considerably heightened transport of TRU, LLW and mixed waste, which has been the subject of considerable impact and safety studies, but receive little attention here. As with the Stockpile Stewardship and biological weapons programs, the need for a programmatic EIS to address national programs to transport waste and LLNL's role is considerable.

The absence of any programmatic "decision" or "action" results in two profound conundrums for the authors of the SWEIS. First, the document inevitably violates the NEPA rule against pre-determination, that is, precluding the irrevocable commitment of resources to a proposed action before environmental review is complete. The EIS is based upon a number of "micro-reviews" of facilities which are, for the most part, being expanded or modified. The lack of detail in the multiple programs described in the SWEIS, and a decision-milestone guide as to each, will enable a number of these programs to "slip through" the NEPA schedule. The majority of planned activities are, in one form or another, continuations of existing programs that have been built or funded.

The second problem presented to the SWEIS authors is the difficulty of comparing "alternatives" in any meaningful quantitative way. The problem is best illustrated by figure S-1 at

page S-9 of the Summary, which purports to provide a "qualitative comparison" of the three alternatives. The graphs, which are devoid of numeric values, give the impression of significant differences in the alternatives, to the extent of 50% between the preferred alternative and the alternative of reduced operation. The problem, of course, is there is no y-scale given to the bar graph, so that we do not know the measure of comparison. If the actual comparative charts are consulted (generally, Table S.6-1), the differences are typically 10% or less in impacts such as housing. In other areas, such as production of TRU and LLW, the differences are greater. But unless the public has the patience to contrast and compare the multiple tables in S.6-1, the quantitatively-devoid graph of S.5-1 reflects differences in operations with no basis of measurement.

Consequently, the SWEIS suffers from a constricted approach to the discussion of alternatives at both poles. Rather than use a conventional "baseline" that would involve ordinary land uses rather than the hazardous activities already ongoing, the public and decision makers begin their review at the 9th floor of a ten-story building. Drawing from the NRC's requirement to its licensees to consider and propose decommissioning plans with license applications, the SWEIS should address the eventual "decommissioning" or brownfield status of LLNL after most if not all operations have ended. This is especially appropriate in the light of U.S. treaty obligations and related commitments which require the United States to negotiate in good faith for the elimination of its nuclear arsenal (see discussion regarding the Nuclear Nonproliferation Treaty below).

At the other pole, the SWEIS must include a fair and frank discussion of ever greater expansion that would incorporate analysis of the impacts of possible future decisions to develop significant nuclear weapons component production capacity "in-house" at LLNL and LANL, and of expanding efforts to modify nuclear weapons and their delivery systems to facilitate potential DOD requirements for nuclear weapons with new capabilities. The failure of the SWEIS to expand its vision beyond the immediate future is directly related to the absence of any consideration being given to updating the 1996 Stockpile Stewardship Programmatic Impact Statement, despite massive mission changes as evidenced by the 2002 Nuclear Posture Review. The Stockpile Stewardship PEIS, like the 1992 Livermore SWEIS/EIR, is hopelessly outdated and cannot be given legal significance as a tiering document to contemporary impact studies.

The narrow scope of the alternatives discussions, particularly on the subject of future growth, derives from the general tendency of the DOE to commit resources in advance of environmental review. The growth witnessed between just the 2002 baseline from prior measures suggests that in all likelihood, the SWEIS is underestimating the growth-inducing and cumulative impacts from LLNL operations over the next ten years, a useful measure given the twelve-year gap between this SWEIS and the prior 1992 SWEIS/EIR.

The Broader View

As referenced above, the decision by the agency to only address these facilities and programs in a site-specific EIS impairs the ability of the public and decision makers to understand

and appreciate the nationwide effects and programmatic linkages inherent in these activities. For example, there is no discussion of the potential impacts to communities along transportation routes for hazardous and radioactive wastes. The SWEIS consistently restricts its impact analysis to "the waters edge", namely LLNL's boundary and perhaps the immediate community.

This deficiency is more serious given the integral role of LLNL in the retooling and accelerated development of the nuclear weapons complex following the Nuclear Posture Review. While the SWEIS is far from explicit, it appears, as noted above, that LLNL may have an expanded role in the production of nuclear weapons components and/or component prototypes, and that nuclear weapons design activities are likely to intensify as well. No effort is made to provide a clear picture of these activities over the period in which it is likely that this SWEIS will be used as a tiering document. The result is segmentation of environmental analysis as serious as that associated with the division of environmental review of any major public work into its disparate components, which have the invariable effect of understating impacts.

In the setting of this SWEIS, the *accuracy* of the environmental analysis is vitiated by the failure to consider corresponding actions or facilities at other sites which depend or relate to LLNL programs. For example, the "no action" or "reduction in activities" alternatives may not necessarily have lesser impacts on a programmatic scale, if the activities are simply being shifted elsewhere. The most obvious example of the transference of impacts is where, as contemplated by the SWEIS, waste is being transported for storage elsewhere. The transport shifts the inherent risks posed by the material to communities along transportation routes and the disposal site. The SWEIS addresses little of this, and cannot rely upon programmatic documents prepared nearly a decade before, specifically those prepared in connection with the Stockpile Stewardship and Waste Management reviews.

There are important domestic and international policy issues implicated by the broad mission changes described in the SWEIS. The public and decision makers have the right to be made aware of and understand these implications, particularly as they relate to the Nuclear Non-Proliferation Treaty, the Biological Weapons Convention, the Statute of the International Criminal Court, international humanitarian law, the advisory opinion of the International Court of Justice on nuclear weapons, and other international instruments and laws affecting nuclear and biological weapons. Significant new activities in both areas also should also be the subject of substantial non-proliferation reviews.

<u>The Nuclear Nonproliferation Treaty</u>

The SWEIS purports to compare No Action, Proposed Action, and Reduced Operations Alternatives. However, the three cases have minimal effect on the facilities and operation proposed by NNSA, so that there is no true alternatives analysis. To comply with NEPA, DOE/NNSA must examine a true alternative based on a zero case, in conformity with the requirements of the Nuclear Non-Proliferation Treaty (NPT).

Under Purpose and Need, the Draft SWEIS gives considerable weight to the 2001 Department of Defense Nuclear Posture Review (NPR), which purports to lay out the direction for U.S. nuclear forces over the next 5 to 10 years. The centerpiece of the NPR is a new strategic triad, "with flexible response capabilities." The authors of the SWEIS give particular deference to the third leg of this new triad, "a revitalized defense infrastructure," which they say, "reflects a broad recognition of the importance of a robust and responsive nuclear weapons infrastructure in sustaining deterrence."

The NPR, a DOD planning document, conflicts in its essence with the NPT, a treaty second only to the United Nations Charter in the number of states parties. The NPT was signed by the United States in 1968. It was ratified and entered into force in 1970, thus becoming part of "the supreme law of the land" under the U.S. Constitution. As U.S. law, the NPT supersedes a DOD planning document. Article VI of the NPT obligates the United States to "pursue negotiations on good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and to a treaty on general and complete disarmament under strict and effective international control." The 1995 extension decision was coupled with a package containing Principles and Objectives for Non-Proliferation and Disarmament, including the completion of negotiations on a Comprehensive Nuclear-Test-Ban-Treaty no later than 1996, immediate commencement and early conclusion of negotiations on a convention banning the production of fissile materials for nuclear weapons, and "[t]he determined pursuit by the nuclear-weapon-states of systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons,….", and a strengthened review process. In 1996, the International Court of Justice, the judicial branch of the United Nations and the highest and most authoritative court in the world on questions of international law issued an authoritative interpretation of Article VI. Interpreting Article VI, the Court unanimously held: : "There exists an obligation to pursue and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control."

At the close of the 2000 NPT Review Conference, the United States and the other nuclear weapon states committed to an "unequivocal undertaking… to accomplish the total elimination of their nuclear arsenals.' For the first time in the NPT's 30-year history they dropped qualifiers like "ultimate goal" regarding their nuclear disarmament obligation. They also agreed to "a diminishing role for nuclear weapons in security policies to minimize the risk that these weapons will ever be used and to facilitate the process of their total elimination." In addition, the U.S. committed to "concrete agreed measures to reduce the operational status of nuclear weapons," meaning it promised to work with Russia to take nuclear forces off hair-trigger alert. And the U.S. agreed that a no-backtracking "principle of irreversibility" applies to nuclear disarmament, nuclear and other related arms control and reduction measures." The 2001 DOD planning document is inconsistent with the United States' nuclear disarmament obligations and commitments under the NPT. Elevating the research and development infrastructure to one leg of a new strategic triad, "that will provide capabilities in a timely manner to meet emerging threats," brings this contradiction into sharp focus.

The zero option remains official U.S. policy and law. As we have consistently maintained,

a zero option is based upon U.S. fulfillment of its obligation under Article VI of the NPT to negotiate the reduction and elimination of its nuclear weapons. That option is well within the universe of reasonable alternatives the SWEIS should examine to inform decisionmaking by DOE/NNSA itself, other agencies, the President, Congress, and the public. Further, it will broaden and enrich the comparative examination of environmental and proliferation impacts. The differing impacts of possible futures are themselves one relevant factor affecting LLLL, yet if NNSA does not study a zero option the range of comparison will be narrow. There is no broader PEIS or other examination of a zero option completed or planned to which the SWEIS can simply refer.

The Accident Analysis Is Incomplete

Other commenters have addressed the technical deficiencies in the SWEIS' estimates of health impacts from various hypothetical accidents (Comment of Peter Strauss, April 27, 2004). Despite recent events and security concerns expressed regarding LLNL, the focus of these bounding accidents appear to be random, human error incidents and not intentional acts. It is unclear whether provisions for intentional act events are excluded because they do not qualify as "accidents" or for reasons of national security.

The SWEIS's analysis carries forward the same approach performed by the Department of Energy over the last twenty years, in that the end result is limited to various calculations of risk-based exposures to radionuclides, and estimates of latent cancer fatalities. The risk figures associated with each accident are nearly always sufficiently low as to be virtually indistinguishable from routine exposures and common workplace risks, if not lower, given the uncertainties attendant to very low levels of exposure to radioactive material. As with every impact report and study performed at LLNL, the authors of the SWEIS cannot conceive of bounding accident that will pose a measurable risk to workers outside the immediate buildings or to the neighboring community.

The approach taken in the SWEIS violates NEPA's broad mandate of an "interdisciplinary approach", and in particular the requirement to consider economic and social impacts (40 CFR §1508.8(b)) as well as effects on urban quality (40 CFR §1502.16(g)). The consideration of human health impacts from any given accident is indeed a necessary and important component of any accident analysis, but it is by no means complete. The SWEIS authors do not even identify the existence of socio-economic impacts from accidents; they appear to assume that none would exist. The SWEIS thus gives the inevitable impression that the sole impact from a measurable release of highly radioactive materials into the human environment would solely consist of a negligible elevation of LCFs incapable of ever being traced or measured.

Yet we know that even accidents or non-routine emissions that produce no immediate, easily measurable fatalities (Three Mile Island being the best-known example) produce substantial socio-economic disruptions in neighboring communities. These disruptions begin with the appearance of civilian first-response teams who will face uncertainties of exposure risk unless they are armed in advance with the comforting statistics in Appendix D of the SWEIS. The SWEIS authors assume that such teams and the public will be in possession of perfect knowledge, will agree with DOE's often controversial risk assessments, will dissociate themselves from commonly-held perceptions regarding radioactive materials, and will not adversely react to the objective conditions of a non-routine event. The public's reaction to a publicized incident is unlikely to track the actual exposure values on a precisely arithmetic basis.

These flaws render the SWEIS accident analysis woefully incomplete as well as misleading. There exists a dense body of studies and evaluation of public risk perception associated with hazardous and radioactive materials which has been measured and known. The social and economic impacts of the public's perception of such risks is immense, as demonstrated by the fact that no applications for licensing of civilian nuclear plants have been submitted to the NRC in the last twenty years. Billions of dollars have likewise been spent evaluating and managing privately-held "brownfields" in which low levels of residual contamination preclude economic development. These economic considerations are driven not by simple mathematical computations of LCFs, but also the effect that even minute quantities of hazardous materials have to public perceptions in the marketplace.

The host of socio-economic impacts associated with a bounding accident involving quantities of radioactive materials include both immediate and long term effects, beginning with traffic and consumption of emergency services engaged in the initial response. Longer term impacts may include loss of use of properties during remediation, possible social dislocation, impacts to local agriculture, and costs associated with long term monitoring. Notably, there is no discussion of the impact on Alameda or San Joaquin County health and environmental departments in the follow-up to a significant release, or even that they were materially consulted during the preparation of Appendix D. As elsewhere, the SWEIS authors engage in the global assumption that local agencies will play their respective roles without complaint or difficulty.

Extension of the Comment Period

Given the bulk of the documentation and complexity of issues associated with the SWEIS, WSLF respectfully requests that the comment period to the draft EIS be extended for an additional ninety (90) days.