

The RadioActivist Campaign

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May 27, 2004

Dear Mr. Grim:

Please consider the following public comment on the LLNL SW/SPEIS, including the attachment, "LLLdata4412.pdf".

Sincerely,
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SUMMARY:

The National Nuclear Security Administration (NNSA) employs a methodology in its environmental impact statement (SW/SPEIS) for the Lawrence Livermore National Laboratory that parallels the methodology LLNL employs in its environmental reporting. Therefore, the technical validity of the LLNL SW/SPEIS can be checked by checking the validity of LLNL's ENVIRONMENTAL REPORT 2002.

It is much easier to "predict" present impacts than future impacts. Thus, NNSA must pass the easier test of reporting present impacts from LLNL objectively before predictions of future impacts can be credited as valid.

The RadioActivist Campaign (TRAC) began a radiological survey outside LLNL, in December 2003. Analytical results of those initial samples demonstrate that LLNL's environmental reporting is technically invalid and is not protective of LLNL's environment and neighbors. This demonstration is true on a "more probable than not" basis.

In consideration of the methodological parallels with LLNL's environmental monitoring program, the LLNL SW/SPEIS is legally insufficient. The LLNL SW/SPEIS should be redone to provide objective assurance of the validity of the resulting environmental impact statement. Therefore, the LLNL SW/SPEIS should be withdrawn and the fundamental deficiencies corrected.

INTRODUCTION:

The National Environmental Policy Act (NEPA) sets legal standards for sufficiency of Environmental Impact Statements (EIS). To be legally sufficient, an EIS must employ a

systematic, objective approach that "insures" realism of the detailed statement of the environmental impact of the proposed actions. Therefore, the proposed actions of a legally sufficient EIS must be demonstrably realistic; that is to say, "technically valid."

The approaches for assessing the environmental impacts employed in the LLNL SW/SPEIS are described in Sec.5.1, Methodology. Neither there or elsewhere in the LLNL SW/SPEIS is there any evaluation of realism (i.e., technical validity) of the analyses of environmental impacts. Indeed, the only statement corresponding to the validity of the LLNL SW/SPEIS appears in the last paragraph of the Cover Sheet, namely that the LLNL SW/SPEIS is "timely".

Even though the LLNL SW/SPEIS fails to validate the document's conclusions, they might yet be realistic but not validated. However, lack of technical validation does open the question of whether the analysis and their conclusions in Chapter 5 of the LLNL SW/SPEIS are legally sufficient.

One way for NNSA and the concerned public to check the validity of the analyses underlying the statement of environmental impact in the LLNL SW/SPEIS is to check the analyses of the existing environmental impact of LLNL, as reported in the LLNL ENVIRONMENTAL REPORT 2002 (UCRL-50027-02), against reality. That is to say if the analyses of the existing environmental impact of LLNL are technically valid, then one could justify a confidence in the LLNL SW/SPEIS conclusions. On the other hand, if analyses of LLNL's existing environmental impacts show the conclusions drawn in the LLNL ENVIRONMENTAL REPORT 2002 are unrealistic, then the LLNL SW/SPEIS is logically insufficient, on the basis of technical invalidity. [perhaps you don't need this paragraph?]

Logically, NNSA must demonstrate objective reporting of LLNL's existing environmental impacts for NNSA's analyses of much less certain, future impacts are to meet the legal requirement of sufficient objectivity. --The present is easier to predict than the future.

This logical consideration is strengthened by the parallel designs of the LLNL SW/SPEIS and the LLNL ENVIRONMENTAL MONITORING PLAN (May 1999, UCRL-ID-106132 Rev. 2). The Purpose of the LLNL "Environmental Monitoring Plan (EMP) is to meet the requirements of U.S. Department of Energy (DOE) Order 5400.1" and other DOE orders and guides [p. 1-1]. Similarly, the LLNL SW/SPEIS was prepared "pursuant to NEPA," that is to say, to meet the legal requirements of NEPA.

Both monitoring and LLNL SW/SPEIS plans begin with statements of what is presently on-site and proposed to be on-site. Then various scenarios are analyzed to assess impacts. Present impacts are reported in LLNL's annual environmental reports. Future impacts, with alternative actions proposed on-site, are reported in LLNL's SW/SPEIS. Structurally, the monitoring and SW/SPEIS systems are technically the same. If either is invalid, the other is invalid. One of these systems, LLNL's monitoring program, can be checked for realism by measuring the present environment around LLNL and comparing

the results to LLNL's monitoring reports. LLNL's monitoring program must pass this check for the predictions of the LLNL SW/SPEIS to have a reasonable chance of being technically valid.

An opportunity for such a check arose with an independent radiological survey around the LLNL site perimeter in December 2003. That survey was conducted by The RadioActivist Campaign (TRAC), and supported by a grant from the Citizens' Monitoring and Technical Assessment Fund. [that's how we're contractually required to refer to the grant.] The radiological results of TRAC's Preliminary Results are compared to LLNL's ENVIRONMENTAL REPORT 2002 of offsite radioactivity, below, to check the radiological aspect of technical validity of the LLNL SW/SPEIS.

TRAC'S RADIOLOGICAL COMPARISON WITH LLNL ENVIRONMENTAL REPORT: TRAC staff reviewed LLNL's ENVIRONMENTAL REPORT 2002 before designing an independent radiological survey outside the LLNL perimeter fence in December 2002.

TRAC noted that LLNL radiological monitoring addresses radionuclides reported on the site ("often associated with LLNL" [UCRL-50027-02, p. EX-2]). The two cited radionuclides are tritium and plutonium (isotopes). LLNL's off-site radiological monitoring focuses on sampling and analyses for these two radionuclides, as well as gross alpha and gross beta counting.

TRAC advised LLNL that LLNL's offsite radiological monitoring program is not robust, because it analyzes only for radionuclides "often associated with LLNL." For LLNL's environmental monitoring program to be technically valid, many or most samples collected from off-site must be analyzed for a wide assortment of radionuclides that might conceivably be produced or released from a nuclear weapons laboratory like LLNL.

TRAC collected 12 environmental samples from candidate pathways from LLNL in December 2003 and analyzed those samples in TRAC's in-house laboratory. The preliminary results appear in RADIOLOGICAL RESULTS OF INITIAL SAMPLES FROM SOME POTENTIAL PATHWAYS FROM THE LAWRENCE LIVERMORE NATIONAL LABORATORY (LLNL) INTO THE SURROUNDINGS--Part 1 (Rev.3, April 12, 2004) (attached document LLLdata4412.pdf). Please append that report in this comment.

TRAC reported both short-lived (iron-59) and long-lived (strontium-90, cesium-137, and americium-241) downwind or downstream of LLNL [Table 1]. A report of strontium-90 in grass next to a pasture, downwind of LLNL was 190 +/- 160 picocuries per kilogram(wet). That value greatly exceeds a reference value of 8 pCi/kgwet for drinking water, albeit with a low level of confidence.

CONCLUSIONS:

(1) TRAC's initial radiological results demonstrate, on a more probable than not basis, that LLNL's environmental monitoring program is not protective of LLNL's surrounding environment and population. This fundamental failure stems from monitoring almost exclusively for radionuclides "often associated with LLNL" for the purpose of meeting regulatory requirements.

(2) LLNL's radiological monitoring program is insufficiently robust to detect and correct its fundamental inadequacies.

(3) These deficiencies of LLNL's radiological monitoring program are severe enough to warrant re-design, from the Plan on up.

(4) These demonstrated deficiencies of the LLNL radiological monitoring program translate directly into deficiencies in the LLNL SW/SPEIS. Therefore, the LLNL SW/SPEIS is legally insufficient on the basis of technical invalidity.

(5) The LLNL SW/SPEIS should be rejected as technically invalid. In future EIS preparations, NNSA should include technical validation procedures from the outset. Those procedures will allow early identification of deficiencies and their correction, so the concluding statement of environmental impact is assured to be technically valid.

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