SUPPLEMENT ANALYSIS: ENHANCEMENT OF PIT MANUFACTURING AT LOS ALAMOS NATIONAL LABORATORY, STOCKPILE STEWARDSHIP AND MANAGEMENT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

March 1998

SUMMARY

Recently, several issues have been raised regarding whether or not the 1996 Department of Energy (DOE) Stockpile Stewardship and Management (SSM) Programmatic Environmental Impact Statement (PEIS) analysis of locating a enhanced pit manufacturing capability at Los Alamos National Laboratory (LANL) should be supplemented due to new or overlooked information. Broadly, these issues have to do with: whether or not connected facilities were considered in the SSM PEIS; whether or not the upgrades to deteriorating facilities at LANL should have been considered in the SSM PEIS; and whether or not more recent information should be considered.

DOE has analyzed these issues in this Supplement Analysis and has concluded that there is no need to prepare a supplemental SSM PEIS to address reestablishing pit fabrication capability. The issues raised were either covered in the SSM PEIS and so were available to the decisionmaker; were project-specific issues related to the implementation of SSM decisions at LANL and so would be subject to subsequent tiered environmental review and decisionmaking; or were preliminary information and so would be subject to future review at such time as they are ripe for decision. Through this Supplement Analysis DOE recommends that neither a Supplemental PEIS, a new EIS, nor an amended ROD be prepared.

INTRODUCTION

Purpose of this Document

This document is a Supplement Analysis prepared to assist the Department of Energy (DOE) to determine whether or not to prepare a Supplemental Programmatic Environmental Impact Statement (PEIS) for its Stockpile Stewardship and Management (SSM) Program. This Supplement Analysis specifically addresses the issue of those aspects of DOE's nuclear weapons pit manufacturing capability and capacity (a "pit" is a central component of a nuclear weapon) that were assigned to Los Alamos National Laboratory (LANL) in the SSM Record of Decision (ROD).

Background - SSM PEIS

Before addressing whether or not the SSM PEIS should be supplemented, consideration of some background information regarding the PEIS, its intent, the decisions reached, and the formulation of issues, is presented. This information assists in arriving at conclusions and recommendations regarding supplementing the SSM PEIS, preparing a new EIS to address pit manufacturing, or changing the SSM ROD. The SSM PEIS was prepared in accordance with the National Environmental Policy Act (NEPA) [42 USC 4321 et seq.], the Council on Environmental Quality (CEQ) NEPA implementing regulations [40 CFR 1500], and the DOE NEPA implementing regulations [10 CFR 1021].

In March 1996 DOE published a Draft PEIS on its nuclear weapons SSM Program [A.R. No. I-1385]; DOE published the Final SSM PEIS in September 1996 [DOE/EIS-0236, A.R. No. I-1561]. The SSM PEIS analyzed how DOE might carry out its nuclear weapons mission assignments, at a programmatic level, including alternative locations where DOE might assign various SSM missions. A ROD, based in part on the environmental analyses in the SSM PEIS, was issued on December 19, 1996 [61 FR 68014, A.R. No. I-1606, A.R. No. VII.B-26]. The SSM PEIS and ROD were intended to address the programmatic decisions facing DOE regarding implementation of its SSM Program. A two-tiered NEPA strategy was adopted, wherein implementing the programmatic decisions at a site-specific level in many cases would be accomplished through subsequent tiered project-specific NEPA reviews [SSM PEIS Vol. I, Sec. 1.5, p. 1-8; see also SSM ROD, Sec. 3.A.4].

The SSM PEIS and the SSM ROD covered those proposed actions which were the salient decision factors for determining how DOE would implement the SSM program for the foreseeable future. One of the proposals involved "Reestablishing Manufacturing Capability and Capacity for Pit Components" [SSM PEIS, Vol. I, Sec. 2.5.3, p. 2-11]. Capability is the practical ability to perform a basic function, and SSM capabilities are needed independent of future nuclear weapons stockpile sizes. Capacity is the size of the capability; in other words, the number of components that could be fabricated at a specific facility or a specific time. The SSM PEIS analyzed the potential capacity at different sites to support a potential nuclear weapons stockpile of various sizes (numbers of weapons) in order to examine the sensitivity of programmatic decisions to transfer weapons manufacturing activities to sites such as LANL. [SSM PEIS Vol. I, Sec. 1.1, p. 1-2.]

DOE needed to reestablish the capability to produce stockpile-ready pits that was lost when in 1992 DOE ceased plutonium pit manufacturing operations at its Rocky Flats Plant (RFP) (now known as the Rocky Flats Environmental Technology Site) in Colorado [SSM PEIS Vol. I, Sec. 2.5.3, p. 2-11]. The programmatic question addressed in the SSM PEIS and ROD related to pit fabrication was which DOE site should receive this mission assignment. Programmatic alternatives for locating pit fabrication alternatives were limited to sites which had some level of technical or facility infrastructure [SSM PEIS Vol. I, Sec. 2.5.3, p. 2-11; SSM PEIS Vol. I, Sec. 3.4.3, p. 3-57]. SSM PEIS alternatives included reestablishing pit capability and capacity at the DOE's LANL; reestablishing the capability and capacity at the DOE's Savannah River Site (SRS); or to continue to rely on the existing capability and capacity at LANL and the DOE's Lawrence Livermore National Laboratory (LLNL). LANL's facility infrastructure is located in several buildings at different Technical Areas (TAs). The three siting alternatives discussed and analyzed in the SSM PEIS were:

1. No Action (continue to use existing limited capabilities at LANL and continue to use the limited capability at LLNL to support material and technology development);
2. Reestablish pit fabrication at LANL (use existing facilities at TA-55, -3, -8, -50 and -54, and construct some upgrades);
3. Reestablish pit fabrication at SRS (use space in existing "hardened" nuclear facilities with extensive equipment and construction upgrades).

The SSM PEIS provided a comparative analysis of the programmatic impacts that would be expected to occur if the pit fabrication capability were to be reestablished at either LANL or SRS, compared against the No Action baseline [SSM PEIS, Vol. I, Section 4.6.3, p. 4-276]. Because construction of new buildings was not anticipated to be needed in order to assign the pit fabrication mission to LANL, notable environmental impacts were primarily limited to those from operations, such as radiological impacts, and socioeconomics. If the pit fabrication mission had been relocated to SRS, some new construction would have been needed [SSM PEIS, Vol. I, Section 4.3.3, p. 4-107]. Appendix A [SSM PEIS, Vol. II, Sec. A.1.5, p. A-28] provided greater detail of the Defense Programs Facilities in use at LANL, including the Chemical and Metallurgical Research (CMR) Building and Sigma Complex at TA-3, and the plutonium (Pu) facilities at TA-55 [Table A.1.5-1]. Similar, but less detailed information, for SRS was also presented [SSM PEIS, Vol. II, Sec. A.1.2, p. A-10]. Appendix A also discussed the specific facilities anticipated to be used for pit fabrication at LANL [SSM PEIS, Vol. II, Sec. A.3.3.1, p. A-117]; a list of specific

facilities (including CMR and Sigma at TA-3, and the Plutonium Facility (PF) 4 and Nuclear Materials Storage Facility (NMSF) at TA-55) and type of construction was provided [SSM PEIS, Vol. II, Table A.3.3.1-1]. The text pointed out that if LANL were selected as the pit fabrication site, the then-current stockpile pit rebuild program at LANL would be absorbed within the pit fabrication effort since the activity would be the same -- only the number of pits would be different (greater) [SSM PEIS Vol. II, p. A-120]. Similar information was provided for SRS [SSM PEIS Vol. II, Sec. A.3.3.2, p. A-124].

In December 1996 DOE issued its programmatic decisions regarding how it would implement the SSM Program. The SSM ROD was based on more than just the environmental analysis of the SSM PEIS. DOE considered "other factors such as DOE statutory mission requirements, national security policy, cost, schedule, and technical risks. Additional technical descriptions and assessments of cost, schedule and technical risk are found in the Analysis of Stockpile Management Alternatives (DOE/AL, July 1996), the Stockpile Management Preferred Alternatives Report (DOE/AL, July 1996) ..." [SSM ROD, Supplementary Information - Background]. The technical and cost analyses for production capability and capacity alternatives analyzed in the SSM PEIS were covered in the draft "Stockpile Management Preferred Alternatives Report" [A.R. No. I-1381] and the "Analysis of Stockpile Management Alternatives" [A.R. No. I-1381], both dated February 1996, mentioned in the Final SSM PEIS [see, for example, SSM PEIS Vol. IV, comment response 40.18, p. 3-107]. The analyses in these reports showed that compared to SRS, locating the pit fabrication mission at LANL would be lower in cost and have less technical risk because LANL had recent experience in providing pits for nuclear explosive testing [SSM PEIS Vol. IV, comment response 32.03, p. 3-81; 32.06, p. 3-81]. These draft reports mentioned in the SSM PEIS were released in final form in July 1996 [A.R. No. I-1506] following the SSM PEIS and were used by the decisionmaker in determining SSM Program implementation decisions.

The DOE SSM decision regarding reestablishing pit fabrication was:

> ...to reestablish the pit fabrication capability, at a small capacity, at LANL. ... This decision limits the plutonium fabrication facility plans to a facility sized to meet expected programmatic requirements over the next ten or more years. It is not sized to have sufficient capacity to remanufacture new plutonium pits at the same production rate as that of their original manufacture. DOE will perform development and demonstration work at its operating plutonium facilities over the next several years to study alternative facility concepts for larger capacity. Environmental analysis of this larger capacity has not been performed at this time because of the uncertainty in the need for such capacity and the uncertainty in the facility technology that would be utilized. Should a larger pit fabrication capacity be required in the future, appropriate environmental and siting analysis would be performed at that time.
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> Mitigation. Specific mitigation measures are not addressed for the stockpile management decisions of the ROD, although many potential mitigation measures are identified in the PEIS. In accordance with the Stockpile Stewardship and Management Program's two-tiered NEPA Strategy, these specific mitigation measures will be addressed, as necessary, on a site-by-site basis, in any site-specific NEPA analyses needed to implement the stockpile management decisions of this ROD.
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> [ROD, Sec. 3.A.4]

In May 1997, a coalition of 39 organizations headed by the Natural Resources Defense Council (NRDC) brought action against DOE for alleged failure, among other things, "to adequately analyze the environmental effects of, and reasonable alternatives to" the SSM Program [NRDC v. Peña, Complaint for Declaratory and Injunctive Relief, May 2, 1997, p. 7]. In an amended complaint plaintiffs brought action against DOE for alleged failure, among other things, "to prepare a Supplemental [PEIS] based upon significant new information regarding the potential environmental impacts arising from ... the fabrication of nuclear weapon cores, or pits, at [LANL]" [NRDC v. Peña, Amended Complaint for Declaratory and Injunctive Relief, January 30, 1998, p. 6 - 7]. The amended complaint included an affidavit from NRDC researcher Christopher Paine (Paine Affidavit) dated January 30, 1998, which

among other things gave five reasons why plaintiffs believe a supplemental SSM PEIS was needed to further address pit production at LANL.

RECENT ISSUES RELATED TO PIT PRODUCTION

Overview

This Supplement Analysis has been prepared to determine whether to supplement that portion of the SSM PEIS which deals with the proposed action to reestablish a manufacturing capability and capacity for pits. It specifically looks at the five points raised by the Paine Affidavit, which are alleged to warrant preparation of a supplemental SSM PEIS. It also examines four issues which were raised by DOE because they may have some bearing on addressing points raised by Paine. The following section describes the issues raised by plaintiffs and by DOE.

Issues Raised by Plaintiff NRDC et al.

The Amended Complaint of January 30, 1998, among other things, asks that a supplemental SSM PEIS be prepared to address pit production at LANL. Reference is made to PF-4, TA-55, which is the main plutonium processing facility at LANL, the CMR Building at TA-3, and NMSF at TA-55. The following five issues and claims of alleged new information regarding DOE's pit production mission at LANL were identified by plaintiffs NRDC, et al., in their amended complaint and accompanying memorandum and supporting documents.

1. **Impacts at TA-55, PF-4.** That all proposed activities analyzed in the SSM PEIS for the LANL pit production mission were assumed to take place at TA-55, PF-4, and that impacts from connected actions were omitted. (Plaintiffs' Memorandum of Points and Authorities, Ex. 1, Affidavit of Christopher Paine, paragraph 19.)

2. **Connected actions.** That the Final PEIS did not identify and assess the connected and cumulative environmental impacts of six projects related to pit production, costing on the order of $1 billion. Those six projects are:
   (a) Modernize facilities and infrastructure at TA-55, particularly PF-4, to allow the continuing safe nuclear materials processing operations needed for pit fabrication through FY 2020.
   (b) Modernize the facilities and infrastructure of the TA-3 Sigma Complex for fabricating nonnuclear (e.g. beryllium, vanadium, uranium) pit components.
   (c) Relocate selected environmentally sensitive nuclear materials missions from TA-55 to CMR to provide sufficient space for expanded pit manufacturing operations at TA-55, a decision that is now under active reconsideration and may be abandoned.
   (d) Add sufficient analytical chemistry to the CMR facility to support increased pit production rates.
   (e) Establish a Special Nuclear Material Transportation Corridor between TA-55 and the CMR facility.
   (f) Renovate NMSF to accommodate increased plutonium inventory resulting from a planned increase in pit surveillance and pit fabrication operations.

   (Plaintiffs' Memorandum of Points and Authorities, Ex. 1, Affidavit of Christopher Paine, paragraph 20.)

3. **Surge planning scenario.** That the PEIS analysis is outdated because it did not analyze the reasonable foreseeable environmental impacts from DOE's approved surge planning scenario for fabricating up to 500 pits per year at multiple sites. (Plaintiffs' Memorandum of Points and Authorities, Ex. 1, Affidavit of Christopher Paine, paragraph 21.)

4. **DNFSB safety consideration.** That the PEIS inadequately considered safety consideration associated with the CMR Building, identified in part in a December 1997 DNFSB report to DOE. (Plaintiffs' Memorandum of Points and Authorities, Ex. 1, Affidavit of Christopher Paine, paragraphs 22 and 23.)

5. **Accidents involving Pu-238.** That the PEIS omitted any analysis of accident consequences involving release of Pu-238, where information indicates that two-thirds of the PF-4 space at TA-55 slated for processing Pu-238 would be located in the same building as pit fabrication activities. (Plaintiffs' Memorandum of Points and Authorities, Ex. 1, Affidavit of Christopher Paine, paragraph 24.)

Issues Raised by DOE

The SSM ROD assigned the mission to reestablish its pit fabrication capability, at a small capacity, at LANL. DOE's plans for implementing the pit production mission at LANL have evolved, organizational changes have been accomplished, and new studies have been initiated regarding regional environmental features. The pertinent issues that have been raised by DOE over the past several months, which bear on the issues raised by plaintiffs, are as follows.

1. **Pit production strategy.** That DOE approved a modified strategy for pit fabrication in December 1997 and in January 1998 directed LANL to pursue the modified strategy. The strategy in general addressed engineering project management, scheduling, and logistics issues. The three objectives of the new strategy are:

   (a) Decouple the specific DOE project for pit fabrication, which is now called the Capability Maintenance and Improvements Project (CMIP), from other projects and focus development of pit production capability at TA-55 without disrupting ongoing mission.
   (b) Maintain pit production as a continuous process, and achieve an intermediate capacity of 20 pits per year by FY 2007 without prejudice to the eventual 50 pit per year capacity.
   (c) Delay CMIP while performing urgent maintenance and equipment replacement beginning in FY 1999.

2. **CMR project management considerations.** That in early 1997 DOE and LANL decided to temporarily suspend construction activities for the CMR upgrades project pending a thorough budget and project management review.

3. **CMR safety reviews and organizational changes.** That on September 2, 1997, in response to safety considerations, LANL temporarily suspended operations within the CMR building pending an in-depth review of all operations and procedures being implemented within the building to support on-going LANL missions. Operations were resumed over time in a phased manner as work control and work authorization procedures were verified for each on-going project within the building.

4. **New earthquake faulting studies at LANL.** That new studies initiated in 1997 indicate an increased likelihood of geologic rupture should certain seismic events occur.

ANALYSIS OF ENVIRONMENTAL ISSUES RAISED

Analysis

For each of the issues outlined above, this Supplement Analysis examines the following factors:

(a) Is the issue germane to a NEPA analysis?
(b) Does the issue represent a substantial change to the proposal analyzed in the SSM PEIS?

(c) Does the issue present significant new circumstances or information relevant to environmental concerns that was not available to the decisionmaker at the time the SSM ROD was issued?
(d) Would the issue, if known at the time, have affected the outcome of the programmatic decisions in the SSM ROD?

If the Supplement Analysis leads to the conclusion that the decisions in the SSM ROD were based on an obsolete analysis, and if new information could have led to a different programmatic decision regarding where to locate the reestablished pit fabrication capability, then the SSM PEIS should be supplemented. If the Supplement Analysis leads to the conclusion that the information raised in the issue was incorporated in the SSM PEIS or otherwise known to the decisionmaker at the time the SSM ROD was issued; that the information pertains to site-specific implementation of programmatic decisions; or that the information is irrelevant to a NEPA review; then the SSM PEIS need not be supplemented.

Analysis of Issues Raised by Plaintiffs

1. Impacts at TA-55, PF-4. That all proposed activities analyzed in the SSM PEIS for the LANL pit production mission were assumed to take place at TA-55, PF-4, and that impacts from connected actions were omitted.

The alternative to reestablish pit fabrication at LANL is discussed in the SSM PEIS in Chapter 3 [SSM PEIS Vol. I, Sec. 3.4.3.2, p. 3-58] which in turn refers to a more detailed discussion in Appendix A [SSM PEIS Vol. II, Appendix A, Sec. A.3.3.1, p. A-117]. Appendix A, Table A.3.3.1-1, lists six separate buildings projected to be used for pit fabrication if the mission were located at LANL. Therefore it was understood that more than one facility would be used for pit fabrication activities at LANL. [See also the Declaration of Paul T. Cunningham, June 6, 1997, paragraph 5.]

The SSM PEIS provided an analysis of those factors that allowed the decisionmaker to discriminate between locating the pit fabrication capability at LANL or SRS. The SSM PEIS focused on major facilities and omitted minor facilities [SSM PEIS, Vol. II, Sec. A.1.5, p. A-28]. The programmatic analysis was based on bounding scenarios for potential impacts at the two sites considered, and the level of detail that appeared in the SSM PEIS was sufficient for the decision to be made -- that of placement of mission.

Environmental impacts from reestablishing pit fabrication at LANL were analyzed in Chapter 4 [SSM PEIS, Vol. I, Sec. 4.6.3, p. 4-276]; impacts to the several facets of the environment were projected based on the description of the alternatives in Appendix A. The discussions under many of the facets made reference to the multiple TAs involved in the proposal; see, for example, the discussion for cultural resources [SSM PEIS, Vol. I, Sec. 4.6.3.7, p. 4-291] which specifically addressed the potential for impacts at each of six TAs. The Paine Affidavit issue specifically addressed impacts for waste management, air quality, and surface water. The PEIS impact analysis for waste management referenced LANL "facilities" in the plural [SSM PEIS, Vol. I, Sec. 3.4.3.2, p. 3-61]; that for air quality was based on either actual stacks or a hypothetical centrally located stack [SSM PEIS, Vol. II, Sec. B.3.6, p. B-14]; that for surface water resources referenced "TAs" in the plural [SSM PEIS, Vol. I, Sec. 4.6.3.4, p. 4-283]. Therefore, where appropriate impacts were analyzed for more than just TA-55.

The SSM PEIS provided a comparative analysis of the action alternatives against the No Action alternative, which served as a reference base [SSM PEIS, Vol. II, Sec. A.1, p. A-1]. Each of the two sites analyzed in the SSM PEIS, LANL and SRS, have an existing infrastructure associated with nuclear operations; hence the impacts associated with locating the pit fabrication mission were additive to the No Action impacts from missions already at each site. The No Action alternative assumed that the sites would continue to operate until at least 2005 with existing facilities that could comply with environment, safety and health requirements, and that facilities would be subject to routine maintenance and repairs. Therefore, the impacts of reasonably foreseeable facility repairs and workloads were included in the No Action baseline.

Consideration of whether actions are connected in the sense of NEPA is useful to determine whether they should be analyzed together, as in a programmatic review such as the SSM PEIS, rather than separately [40 CFR 1508.25(a)(1)]; it is appropriate to consider in one programmatic analysis the impacts from establishing connected pit fabrication activities in several facilities. The SSM PEIS did this. In keeping with the two-tiered NEPA strategy outlined in the SSM PEIS [SSM PEIS, Vol. I, Sec. 1.5, p.1-8], DOE decided that the impacts of implementing programmatic decisions at a site-specific level would be addressed in subsequent tiered project-specific NEPA reviews [SSM ROD Sec. 3.A.4].

totally contradictory

All p. decisions are implemented at site specific level

The LANL Site Wide EIS (SWEIS), currently in preparation in accordance with 10 CFR 1021.330(c), will provide a site-specific look at the cumulative impacts of operating LANL; it will also analyze four alternative ways to continue to operate the entire site for the next ten years [Advance Notice of Intent (ANOI) to prepare the SWEIS [59 FR 40889, August 10, 1994], A.R. No. VII.B-14; Notice of Intent to prepare the SWEIS [60 FR 25697, May 12, 1995], A.R. No. VII.B-18; LANL SWEIS Implementation Plan [DOE/EIS-0238], November 1995, A.R. No. VII.B-20]. The four planned draft alternatives are:

(a) No Action - continue LANL operations at their current planned level.
(b) Expanded Operations - implement all current DOE mission element assignments to LANL at the highest foreseeable level of activity and fully implement recent mission assignments.
(c) Reduced Operations - conduct the minimal level of activity necessary to maintain capabilities necessary to support DOE missions.
(d) Greener Operations - use LANL capabilities to minimize support to DOE defense and nuclear weapons missions, and maximize support to other DOE mission elements.

The LANL SWEIS will consider the impacts of implementing the SSM programmatic decisions at LANL. It will consider enhancement of the existing pit manufacturing capability at LANL, and is expected to provide a project-specific NEPA review for certain aspects of the SSM ROD pit fabrication mission assignment, including CMIP. The SSM PEIS looked at pit fabrication needs over the next 10 or more years, essentially the same timeframe as the LANL SWEIS analysis. Under the No Action Alternative (the base case in the SWEIS analysis), LANL could continue to fabricate pits at the existing capability level (approximately a pit per month); under the Expanded Operations alternative, LANL could fabricate 50 pits per year (using a single labor shift) or achieve 80 pits per year (the surge level indicated in the SSM PEIS) within the 10-year timeframe; and under the other two alternatives LANL could maintain a pit manufacturing capability but produce pits at a lesser number.

The Draft LANL SWEIS is currently scheduled for release to the public for review and comment in May 1998. The Final SWEIS is scheduled for November 1998, and the ROD for late 1998.

mentioned but not analyzed they go back & forth.

The issue is in error regarding the allegation that only TA-55 was considered in the SSM PEIS; the SSM PEIS analysis was based on the projection that several major and minor facilities at LANL would be involved in pit fabrication. The issue provides no new information that was not available to the SSM decisionmaker. Therefore, no change to the SSM PEIS is warranted.

not true but can't convince court

CMR Sometimes these facilities are in pit fab — sometimes not.

2. Connected actions. That the Final PEIS did not identify and assess the connected and cumulative environmental impacts of six projects related to pit production, costing on the order of $1 billion. Those six projects are:

(a) modernize facilities and infrastructure at TA-55, particularly plutonium Facility 4, to allow the continuing safe nuclear materials processing operations needed for pit fabrication through FY 2020;

The SSM PEIS limited its review of alternative locations for reestablishing pit fabrication to those sites that already had some measure of the appropriate technical or facility infrastructure [SSM PEIS Vol. I, Sec. 2.5.3, p. 2-11]; only

two sites, LANL and SRS, qualified. At LANL the preexisting plutonium capability existed largely at TA-55, which contributed to LANL qualifying as an alternative site. Facilities at LANL such as TA-55 are used to support a variety of mission needs for a variety of sponsors [SSM PEIS Vol. I, Sec. 3.2.6, p. 3-18; Table 3.2.6-1, p. 3-19]. TA-55 is one of the newer facilities at LANL (first occupied in the late 1970s); like all buildings it requires periodic maintenance in order to continue to operate. The SSM PEIS indicated that no facilities at LANL would be phased out regardless of decisions on pit fabrication stemming from the SSM PEIS [SSM PEIS Vol. I, Sec. 4.6.1, p. 4-246]. It is essential to maintain the nuclear infrastructure at LANL in safe operating condition and perform upgrades when necessary to achieve environment, safety and health goals. Therefore, the SSM PEIS decisionmaker was aware that DOE would be obligated to repair and maintain its facilities at LANL, including TA-55, in a safe operating condition independent of the mission assignment for pit fabrication. LANL has existing capabilities that are essential to support other ongoing missions in addition to pit fabrication, such as the TA-55 capability for residue processing and for storing and handling plutonium. Although TA-55 facilities are being used to support LANL's pit fabrication mission, facility maintenance requirements exist independent of this mission assignment.

DOE included requirements and plans for refurbishing nuclear facilities at LANL as part of the No Action alternative in the SSM PEIS. In addition, this issue was addressed in the Final PEIS Comment Response Document [SSM PEIS, Vol. IV]. In response to a question of why DOE is investing in new facilities at LANL, DOE stated that "The TA-55 plutonium facility is approaching 20 years of service and many components of the facility need replacement or upgrading in order to sustain the R&D mission of the laboratory." [SSM PEIS Vol. IV, comment response 32.16, p. 3-84.] DOE further stated: "It is true that DOE has determined that, under the existing stockpile stewardship and management activities that have been ongoing for many years, facilities at LANL will have to be maintained and in some cases repaired or upgraded to allow LANL to continue to fulfill its existing mission. Far from being a 'stunning admission' that future assignments are already being implemented, DOE believes that is simply good management practice to keep its considerable real property -- its buildings and other infrastructure -- in safe, sound, and operating order." [SSM PEIS, Vol. II, comment response 40.90, p. 3-144.] DOE and LANL need to continue to operate TA-55 and PF-4 in a way that will allow the safe operation of the buildings to support nuclear materials processing operations for the indefinite, foreseeable future; one such use, but not the only such use, will be pit fabrication activities. In addition to the repairs and maintenance that would take place under the No Action baseline, the SSM PEIS acknowledged that upgrades to PF-4, TA-55 would be needed to implement the pit fabrication mission [SSM PEIS, Vol. I, Sec. 3.4.3.2, p. 3-58].

The SSM PEIS provided a programmatic review of the factors needed for the decisionmaker to discriminate between locating the pit fabrication activities at LANL or SRS. Under the two-phase NEPA strategy outlined in the SSM PEIS, project-specific decisions related to exactly how the programmatic decisions would be implemented at LANL would be covered in subsequent tiered NEPA reviews. Although the SSM PEIS indicated it assumed, as a No Action base case, that operating facilities at LANL and SRS would be kept in safe, environmentally compliant operating condition [SSM PEIS, Vol. II, Sec. A.1, p. A-1], it did not analyze at the site-specific level exactly how that would be accomplished. That level of detail would have been unnecessary, hence inappropriate, for a programmatic siting decision. Any future proposals to upgrade equipment or structures at TA-55 would be looked at to determine if they would be subject to NEPA review; any such review pertaining to pit fabrication would be considered a tiered review flowing from the SSM PEIS and ROD. This issue was also addressed in November 1997 as part of the court-ordered disclosure of information regarding pit production activities at LANL.

The Paine Affidavit makes reference to a newspaper article about the pit fabrication project (Paragraph 20, Attachment G), "LANL Plutonium Pit Project Plagued by Cost Overruns" [*Santa Fe New Mexican,* December 5, 1997, p. A-1, A.R. VII.B-44]. This article was based on a wide-ranging interview with the LANL pit fabrication program manager, and discussed the then-current status of the pit fabrication project. The article discussed cost overruns in the CMR Upgrades project. The situation regarding cost overruns in the CMR Upgrades project is addressed under DOE Issue 2, below. The article also referenced five upgrade alternatives; these are discussed below under Plaintiffs' Issue 5, Paine Affidavit Attachment J. The information referenced in the newspaper article does not constitute a substantial change to the programmatic proposal analyzed in the SSM PEIS.

This issue is not germane to a programmatic decision as to whether to site pit fabrication capabilities at LANL or SRS. Because it was understood in the SSM PEIS that facilities such as TA-55 needed to be kept in safe operating condition regardless of whether or not LANL received the pit fabrication mission, this issue does not present new information that was not available to the SSM decisionmaker. Even if a NEPA review would be required, it would be a tiered, project-specific review. Therefore, no change to the SSM PEIS is warranted.

(b) modernize the facilities and infrastructure of the TA-3 Sigma Complex for fabricating nonnuclear (e.g. beryllium, vanadium, uranium) pit components;

Nonnuclear weapons components such as those made from beryllium are an integral part of a pit; fabricating beryllium and other components was reassigned to LANL in 1993 prior to and independently of the pit fabrication mission assignment [SSM PEIS Vol. IV, comment response 32.08, p. 3-83]. In 1992 DOE decided to prepare an Environmental Assessment (EA) on its proposal to consolidate certain nonnuclear facilities within the nuclear weapons complex [57 FR 3046, January 27, 1992, A.R. No. VII.B-5], and completed the EA in June 1993 [DOE/EA-0792, A.R. No. III-85]. In this context, nonnuclear facilities are those which manufacture or test the nonnuclear parts of nuclear weapons. These parts include such things as electronics, batteries, detonators, and specifically include beryllium technology and pit support [Nonnuclear Consolidation EA Executive Summary, p. ES-1, DOE/EA-0792(ES), A.R. No. VII.B-9]. On September 14, 1993, DOE issued a Finding of No Significant Impact (FONSI) on the Nonnuclear Consolidation EA [58 FR 48043, A.R. No. VII.B-12] after considering public comments on a proposed FONSI [A.R. No. VII.B-11]. The then-proposed action included a proposal to enhance existing beryllium technology at LANL: "Beryllium Technology and Pit Support -- The existing technology base and prototyping capability at LANL would be enhanced to provide limited manufacturing capability for beryllium technology and pit support now done at RFP." [58 FR 48045.]

As soon as the FONSI was issued, DOE began to implement the proposed action [Letter from Howard Canter, Deputy Assistant Secretary for Weapons Complex Reconfiguration, to Interested Parties, September 24, 1993, A.R. No. VII.B-13]. The beryllium technology work from RFP was subsequently moved to the Sigma Complex at TA-3, LANL, to complement and enhance the prior existing capability.

The DOE's proposal to enhance the capability at the TA-3 Sigma Complex for beryllium technology and pit support functions was analyzed at length in the Nonnuclear Consolidation EA, June 1993, and discussed in its FONSI, September 1993. Implementation of this proposal began shortly after the FONSI was issued and included upgrades to Sigma Complex. Therefore, this decision did not have to be revisited in the SSM PEIS; since no decisions were needed on this aspect, no additional NEPA analysis was needed in the SSM PEIS.

This issue does not present new information that was not available to the SSM decisionmaker. Therefore, no change to the SSM PEIS is warranted.

(c) relocate selected environmentally sensitive nuclear materials missions from TA-55 to the aging CMR building to provide sufficient space for expanded pit manufacturing operations at TA-55, a decision that is now under active reconsideration and may be abandoned;

The SSM PEIS addressed the programmatic issues related to whether to site pit fabrication activities at LANL or SRS. The SSM PEIS stated that site-specific implementation of the programmatic decision would be addressed in subsequent tiered NEPA reviews [SSM PEIS, Vol. I, Sec. 1.5, p. 1-8]. The CMR Building is needed to support ongoing LANL work regardless of the assignment of the pit fabrication mission to LANL, and space allocations for assignment of work relating to nuclear materials may or may not be relevant to the pit fabrication mission. For pit fabrication, the specifics of exactly what processes would go in which building would be a site-specific detail of implementation beyond the intent of the SSM PEIS. A planning decision has not yet been made regarding whether to propose the use of the CMR building for missions relocated from TA-55, if, in fact, any activities are moved from

TA-55. Potential environmental impacts for this scenario, if proposed, would be analyzed in project-specific NEPA reviews when appropriate. Alternatives to moving activities from TA-55 to CMR are anticipated to be addressed in the LANL SWEIS, including the potential for expanding TA-55. In the event that a decision that is made through a NEPA review is subsequently abandoned, additional NEPA review is not needed to address the agency's failure to take the action.

This issue does not present new information that is germane to a programmatic SSM decision. Therefore, no change to the SSM PEIS is warranted.

(d) add sufficient analytical chemistry capacity to the CMR facility to support increased pit production rates;

LANL has existing capabilities that are essential to support other ongoing missions in addition to pit fabrication including the capability for analytical chemistry in CMR. In 1997 DOE completed its EA on the proposed upgrades to the CMR Building [DOE/EA-1101, A.R. No. VII.B-27]. DOE found that no significant impacts would be expected to occur, therefore an EIS on that proposal was not needed [FONSI, February 11, 1997, A.R. No. VII.B-28]. The EA analyzed upgrades needed to make the building continue to be useable for the foreseeable future for continuing ongoing mission assignments. It specifically did not analyze upgrades needed to implement potential future new mission assignments. The CMR FONSI covered two potential upgrade designs for the CMR upgrades. Under the first, DOE would upgrade the chemistry space in three wings with collocated office space. Under the second, DOE would upgrade the chemistry space in two wings, relocate office space, and put the third wing in safe standby condition. The FONSI stated that if DOE selected the second design, and subsequently considered the space in the third wing for other programmatic needs, DOE would perform a separate NEPA analysis regarding any proposed new mission use.

DOE must maintain the nuclear infrastructure at LANL regardless of the pit fabrication mission in order to perform nuclear operations safely and reliably. Analytical chemistry is needed to support pit fabrication [SSM PEIS, Vol. I, Sec. 3.4.3.2, p. 3-58; Sec. 3.4.3.3, p. 3-64]. The SSM PEIS analyzed analytical chemistry as part of the infrastructure capability for each site (LANL and SRS) sufficient to support the pit capacities analyzed. The CMR building, built in the early 1950s, requires maintenance, repairs and upgrades to sustain the effectiveness and safety of the facility. These upgrades were addressed in the No Action Alternative in the SSM PEIS [SSM PEIS, Vol. IV, comment response 41.18, p. 3-158] and in the CMR EA and FONSI of February 1997. [See also the Declaration of Paul T. Cunningham, paragraphs 9 and 10, and the Second Declaration of Albert E. Whiteman, paragraph 5.d.1.]

X There are no proposals to increase pit production rates over those analyzed in the SSM PEIS. Although at the request of Congress DOE and LANL have done some preliminary contingency planning as to how higher production rates might be achieved, if ever necessary, these considerations have not reached the state of an agency proposal, hence are not ripe for decision or NEPA review (see Plaintiffs' Issue 3, below).

This issue is based on incorrect information regarding rates of pit fabrication. The issue does not indicate that the analytical capability analyzed in the PEIS was incorrect. Therefore, no change to the SSM PEIS is warranted.

(e) establish a Special Nuclear Material Transportation Corridor between TA-55 and the CMR facility;

Although the idea of paving an existing, essentially abandoned, gravel road between TA-55 and the CMR Building at TA-3 has been discussed over the years, and may have some advantages for the safe, secure transport of nuclear materials between those two facilities, DOE has not yet formally proposed to undertake this action; however, it is anticipated that this may be included in the SWEIS as part of the consideration of a possible new transportation corridor between the two buildings.

This issue is not germane to a programmatic NEPA review since it is at the level of a minor site-specific infrastructure feature. While it may be a convenience in operating LANL facilities, it is not a necessary action for

pit fabrication and does not bear on the programmatic decision to locate the pit fabrication mission at LANL. Therefore, no change to the SSM PEIS is warranted.

(f) renovate and make major modifications to the Nuclear Materials Storage Facility (NMSF) at TA-55 to accommodate increased plutonium inventory resulting from planned increase in pit surveillance and pit fabrication operations.

In 1986 DOE completed an EA and FONSI on the construction and operation of the then-new proposal for NMSF. [Memorandum, DOE/HQ, EH-1, Assistant Secretary Walker, to DOE/HQ, DP-1, Assistant Secretary Foley, August 28, 1986, A.R. VII.B-2; NMSF EA, A.R. No. VII.B-1, and FONSI, August, 1986, A.R. No. VII.B-2.] The operation of NMSF for its intended purpose was considered in the SSM PEIS as part of the No Action baseline and as a facility that could be used to support pit fabrication at LANL.

The NMSF was conceived in the early 1980's as a centralized facility at LANL for receipt and intermediate to long-term storage of special nuclear materials. Upon completion of construction of NMSF in 1987, DOE and LANL identified design and construction deficiencies in this facility which precluded the acceptance of the structure for occupancy; the introduction of nuclear materials into the NMSF was therefore not possible because it could not be used for its intended function and because health and safety operating parameters could not be met. In the early 1990's a series of studies was conducted to determine what needed to be done to bring the structure to an operable state. The repairs came to be known as the "NMSF Renovation Project." The NMSF renovations would allow the building to operate at its original design capacity (6.6 metric tons of plutonium) to support ongoing mission assignments at LANL, and were determined to be covered by the 1986 NMSF EA [Memorandum, Webb, DOE/LAAO, to Foxx, LANL, December 21, 1994, A.R. VII.B-17; covering memorandum, Reis, DOE/HQ/DP-1, to Manager, DOE/AL, November 9, 1994, A.R. No. VII.B-15; see also Ellard, LANL, May 14, 1993, A.R. No. VII.B-6, and Tingley et al., LANL, May 25, 1993, A.R. No. VII.B-7].

DOE is now renovating the facility to correct design and construction deficiencies in the structure, and damage and deterioration resulting from these deficiencies. Conceptual design for the NMSF renovations began in 1997, preliminary design began in 1998, final design is expected to start in the spring of 1999, construction is scheduled to begin in the summer of 2000, and the renovations are scheduled to be completed in 2004. The renovations will allow the facility to store up to 6.6 metric tons of plutonium, as was covered in the 1986 EA and FONSI. The facility will be used to support many on-going LANL mission requirements, including the SSM Program.

DOE plans to renovate the NMSF, as has been discussed since 1992, to correct design and construction deficiencies in the structure and damage and deterioration resulting from these deficiencies. However, the renovations would serve only to make the building functional in order to perform the activities discussed and analyzed in the 1986 NMSF EA and FONSI. The baseline used in the SSM PEIS for determining the impacts of reestablishing pit fabrication capability at LANL included making use of NMSF when functional (NMSF cannot be used to store nuclear materials until it becomes functional which would not be possible until renovation activities have taken place). The plans to renovate the NMSF were known to the SSM decisionmaker and do not constitute new information. There are no plans to store additional material in the NMSF over the amount considered at the time the SSM PEIS was prepared -- the NMSF will be renovated to accommodate storing 6.6 metric tons of plutonium, the same amount of material used as the basis of the analysis in the 1986 NMSF EA.

There are no proposals to increase pit production rates over those analyzed in the SSM PEIS. Although at the request of Congress DOE and LANL have done some preliminary contingency planning as to how higher production rates might be achieved, if ever necessary, these considerations have not reached the state of an agency proposal, hence are not ripe for decision or NEPA review (see Plaintiffs' Issue 3, below). There are no plans to increase pit surveillance over current projections (known to SSM decisionmakers) or to increase pit fabrication operations over the levels analyzed in the SSM PEIS.

This issue was earlier addressed in this litigation in the First Declaration of Albert E. Whiteman. He states that the NMSF renovation was considered in the baseline No Action alternative of the SSM PEIS, and that these "activities are necessary for ongoing stockpile stewardship and management independent of the determination made in the SSM-PEIS." [First Declaration of Albert E. Whiteman, p. 2. See also Declaration of Paul T. Cunningham, paragraph 11.]

This issue does not present new information that was not available to the SSM decisionmaker. The issue regarding increase in pit fabrication operations over that analyzed in the SSM PEIS is erroneous. Therefore, no change to the SSM PEIS is warranted.

3. Surge planning scenario. That the PEIS analysis is outdated because it did not analyze the reasonable foreseeable environmental impacts from DOE's approved surge planning scenario for fabricating up to 500 pits per year at multiple sites.

The SSM PEIS analysis of fabricating 20 to 50 pits per year, with 80 pits per year on a surge basis, was predicated on the need for new pits over the next 10 or more years. For comparison, the capacity of RFP when operating was about 2,000 pits per year [SSM PEIS Vol. IV, comment response 32.01, p. 3-80]; the SSM PEIS addressed reestablishing the former RFP capability but not its former capacity. DOE was aware at the time the PEIS was prepared that future requirements for capacity for pit fabrication were uncertain [SSM PEIS Vol. I, Sec. 3.6, p. 3-93]. In the SSM PEIS Comment Response Document, DOE stated: "Because of the small demand for the fabrication of replacement plutonium pits over the next 10 or more years, DOE did not propose a new pit fabrication facility with a capacity equivalent to the capacities required for other portions for the nuclear weapons complex. However, limited fabrication of new replacement pits would be required to maintain capability and to replace pits lost during weapons surveillance. Section 3.6 discusses DOE's future plans should a life-limited phenomenon be found in stockpile pits and a larger pit fabrication capacity be required." [SSM PEIS Vol. IV, comment response 40.19, p. 3-107.] The SSM ROD indicated that if a greater capacity for pit fabrication were to be needed in the future, appropriate environmental and siting analyses would be performed at that time [SSM ROD Supplementary Information; Sec. 3.A.4]. To date, the nation has not determined future stockpile rates to be greater than anticipated in the SSM PEIS, and DOE has no proposals at this time to establish a greater pit fabrication capacity within its planned capability.

Part of the assignment given to LANL by the SSM ROD was to assist DOE in developing equipment and technologies to expand the limited capability assigned in 1996 to LANL into a larger capability that might be needed by DOE at some site at some point in the future. This did not imply that such an expanded capacity, if ever needed, would be located at LANL; instead, the SSM ROD stated that in this event, environmental and siting studies would be performed [SSM ROD 3.A.4].

The Paine Affidavit makes reference to LANL's Institutional Plan for FY 1998 - 2003 (Paragraph 21, Attachment H). The "Institutional Plan FY 1998 - FY 2003" [LALP-97-130, October 1997, A.R. No. VII.B-40], in turn, makes reference to a multi-site study and the consideration of a modular production capability that could be deployed rapidly if there was a change from the requirements considered in the SSM PEIS and ROD [LALP-97-130, p. 28]. In February 1996 DOE formed an inter-site team which was asked to develop a plan which would provide a strategy to establish a project in FY00 which would be responsible for developing a means to achieve a higher pit production capacity within five years of an identified need [Memorandum, February 21, 1996, Whiteman to Veldman, et al., A.R. No. VII.B-22; Attachment, "Rapid Reconstitution of Pit Production Capacity," February 20, 1996, Khalil, DOE AL, A.R. No. VII.B-21]. The memorandum stated that the project needed to provide a scaleable capacity, and would require development and technology demonstration; the SSM ROD subsequently recognized this: "DOE will perform development and demonstration work at its operating plutonium facilities over the next several years to study alternative facility concepts for a larger capacity." [SSM ROD, Sec. 3.A.4.] This memorandum predated the SSM PEIS and was known to the SSM decisionmaker. In August 1997 the inter-site team completed its report, "Rapid Reconstitution of Pit Production Capacity: Systems Studies Assessment and

Recommendations" [LLNL UCRL-ID-128655, Jardine, LLNL, Reardon, LANL, and Grimley and Branstetter, Sandia National Laboratories, August 1997, A.R. No. VII.B-36]. This document is subject to controlled distribution because it contains Unclassified Controlled Nuclear Information (UCNI) material. The strategy responds to the 1996 memorandum charge to be able to establish a greater capacity within five years of an identified need. The SSM ROD stated that in the event a larger capacity were ever needed, appropriate siting and environmental reviews would be performed at that time [SSM ROD, Sec. 3.A.4]. While the August 1997 report was completed after the SSM ROD was issued, it addressed a topic that the SSM ROD specifically excluded as a reasonably foreseeable action requiring a programmatic decision at that time. Therefore neither the LANL Institutional Plan nor the 1997 rapid reconstitution plan present new information that would bear on the SSM ROD decisions to site pit manufacturing capacity at LANL.

not possible- must be built already

→ when does programmatic review take place?

As part of prudent planning to support and maintain the directed stockpile levels in the event of an unforeseen future issue that could affect national security, at the request of Congress in FY96 DOE began work on a preliminary contingency plan that could put into place a production capability of up to 500 pits per year. In the National Defense Authorization Act for Fiscal Year 1997, P.L. 104-201, Section 3151, Congress required the Secretary of Energy to submit to Congress a report on DOE's plans for achieving the capability to produce and remanufacture plutonium pits. In response to that requirement, DOE prepared the "Department of Energy Report on Plutonium Pit Production and Remanufacturing Plans" [Letter, Secretary Peña to Congressman Floyd Spence, Chairman, Committee on National Security, U.S. House of Representatives, August 18, 1997, covering "Department of Energy Report on Plutonium Pit Production and Remanufacturing Plans, Secretary of Energy, July 1997," A.R. No. VII.B-37]. The report provided Congress with DOE's initial baseline plan to restore the capability to produce pits for the nuclear weapons stockpile (war-reserve pits). The baseline consisted of three parts: (a) demonstrate that the capability to produce war-reserve pits can be reestablished at LANL; (b) install a limited capacity at LANL to produce up to 50 war-reserve pits; and (c) develop a contingency plan to establish capacity to produce up to 500 war-reserve pits, using LANL technology as a model, at existing DOE buildings at SRS, DOE's Oak Ridge Reservation, DOE's Pantex Plant, and DOE's Nevada Test Site [Report, p. 2]. The number 500 was used for planning purposes because it represented a rate which could reproduce a large quantity "lot" within a reasonable timeframe, and because it was felt to be achievable by replicating multiple setups of the type that are being put into place at LANL. [See also A.R. No. VII.B-42.] No specific requirements for an upper capacity number have yet been developed. This preliminary plan, which has never progressed beyond its very early stages, is currently on hold pending development and evaluation of the design, processes, equipment, and feasibility of the current ongoing pit rebuild program at LANL. As stated in the SSM ROD, any decisions to pursue an expanded capacity in the future, including siting decisions, would be subject to further NEPA review [SSM PEIS, Vol. I, Sec. 1.5, p. 1-8].

not a proposal if request by Congress? Evidence that concrete.

euphemism for proposal

3 legs of plan— SSM PEIS analyzed 2

identified sites

yes, 10 ≡

but it is an integral part of the plan

→ inappropriate segmentation. Analyze 10% in PEIS, 90% in some EIS or EA later.

The Weapon

The SSM PEIS and ROD acknowledged that future needs for pit fabrication capacity are unknown, and that future plans for future capacities will be subject to future NEPA review. The contingency plan requested by Congress, which has had some preliminary work, is not fully developed and is not expected to be fully developed for quite some time. Therefore it does not represent a proposal within the meaning of NEPA, and is not ripe for analysis or decision. → wrong

This issue does not present new information that is germane to the programmatic decisions in the SSM ROD. It raises an issue that is not yet ripe for NEPA review. Therefore, no change to the SSM PEIS is warranted.

Smith testimony Green book

debunk →

what, exactly, was reestablished?

a) was never in question

b) what we are really talking about is c) which has been deferred, so we are really talking about c)

4. DNFSB safety consideration. That the PEIS inadequately considered safety consideration associated with the CMR Building, identified in part in a December 1997 DNFSB report to DOE.

The DNFSB, established in 1988, has certain oversight responsibilities for nuclear facilities at LANL, such as TA-55 or CMR. Under its enabling statute [42 USC 2286] DNFSB is responsible for independent, external oversight of all activities in DOE's nuclear weapons complex affecting health and safety. The DNFSB reviews operations, practices, and occurrences at DOE's defense nuclear facilities and recommends actions to the Secretary of Energy to protect public health and safety. As such, the DNFSB assists DOE in its continuous efforts to control risks associated with its operations and to continually improve its performance. This aspect of site management is an integral component of continuing operations at all DOE sites, including LANL.

In July 1997 LANL provided DOE and the DNFSB with a copy of the draft "Enhanced Conceptual Design Report (ECDR) for the Capability Maintenance and Improvement Project (CMIP)" referenced in Paragraph 23 of the Paine Affidavit. The DNFSB conducted an on-site review of the draft ECDR in September 1997. The DNFSB letter of December 5, 1997, referenced in Paragraph 23 of the Paine Affidavit as Attachment I [A.R. No. VII.B-45], provided input to DOE and LANL on the draft ECDR. Completion of the draft ECDR is currently on hold due to project changes and funding considerations. DOE recently approved a modified approach to implementing CMIP [Memorandum, January 12, 1998, Whiteman to Cunningham, A.R. No. VII.B-50] (see DOE Issue 1), and the draft ECDR will be revised to accommodate the modified strategy. Given current funding and schedule considerations, LANL does not expect to resume work on the draft ECDR until FY99, with FY00 as the earliest completion date.

The issues raised by the DNFSB in its December 1997 letter are management and process issues consistent with the charter of that Board. While it is possible that future DOE initiatives associated with correcting the problems noted by the DNFSB could be subject to future NEPA reviews, no such proposals have yet been made. Furthermore, the management and process issues raised by the DNFSB do not affect the programmatic question of assignment of the pit production mission to either LANL or SRS addressed in the SSM ROD. Any proposals resulting from these issues will be appropriately addressed by further, facility-specific NEPA reviews.

CMR project management and operational considerations are discussed under DOE Issues 2 and 3. Construction of the CMR Upgrades project was temporarily suspended in the spring of 1997 pending review and implementation of better project management controls. That work was completed and construction restarted in the summer of 1997. Project management considerations of the Upgrades Project, CMR operations safety reviews and organizational changes are unrelated to NEPA reviews. In the fall of 1997 in response to safety considerations, LANL temporarily suspended operations within the CMR building pending an in-depth review of all CMR operations. Operations were resumed over time in a phased manner as work control and work authorization procedures were verified for each on-going project within the building; most operations have resumed. In November 1997, LANL received a new Director; in January 1998 the Director reorganized the management structure for operating the CMR Building and its ongoing operations. Budgeting, establishing project management controls, temporary suspension of work to review operational safety, and establishing management organizations would not be subject to NEPA. While it is possible that certain activities taken to improve operational safety may be subject to NEPA, any such action pertaining to implementing pit fabrication activities at LANL would be of a facility-specific nature; in other words, would be tiered from programmatic decisions established in the SSM ROD.

The DNFSB letter of December 5, 1997 also mentioned earthquake faults in the vicinity of TA-3 and the CMR Building; this is discussed under DOE Issue 4. In 1997, LANL geologists initiated a study of the interrelationship of three known geologic faults (Pajarito, Guaje Mountain, and Rendija Canyon faults) in the vicinity of LANL. The preliminary results of that draft study were presented to DOE management [Memorandum, October 28, 1997, Ives, DOE/HQ, to Manager, DOE AL, A.R. No. VII.B-41; Memorandum, Senazi to Trapp, November 13, 1997, A.R. No. VII.B-43; Attachment 1: memorandum, Ives to Manager, October 28, 1997, A.R. No. VII.B-41]. The results to date indicate a possible connection between the three faults, which would increase the likelihood of geologic rupture should a seismic event occur. This could indicate that some buildings in TA-3 might be vulnerable to damage if

Judge very Here they go ! again. The condition of those decrepit bldgs isn't relevant? The people who brought us PF are at work again. Contrast w/ previous assumptions on ES&H

certain seismic events occurred. DOE requires its sites to review seismic information at about ten year intervals to determine if there is any new information that would result in revising site management actions [DOE Order 420.1, Facility Safety, Sec. 4.4, Natural Phenomena Hazards Mitigation]; LANL has been performing site studies for several years in response to this requirement. Additionally, DOE is conducting an agency-wide review of seismic safety at all of its facilities in response to EO 12941, "Seismic Safety of Existing Federally Owned or Leased Buildings" [59 FR 62545, A.R. No. VII.B-16], and a related DOE implementing guidance memorandum of October 18, 1996 from the Assistant Secretary for Environment, Safety and Health. This report is due to the Federal Emergency Management Administration by December 1, 1998, and has not yet been issued.

The preliminary studies and draft reports indicate the need to consider revising building engineering standards at LANL [Memorandum, Ives to Manager, October 28, 1997, A.R. No. VII.B-41]. The LANL seismic studies do not indicate that the probability of an earthquake event is any more likely than previously thought; the SSM PEIS discussed the known moderate seismic risk at LANL and the possibility of a seismic event as an accident initiator [SSM PEIS, Vol. I, Sec. 4.6.3.5, p. 4-288; Vol. II, Appendix F, Sec. F.2.3.1, p. F-21, F-22; see also SSM PEIS Vol. I, Glossary, definition of "capable fault," p. 9-3]. These studies indicate, however, that DOE, LANL and safety agencies must come to agreement on the amount of seismic protection needed for new and retrofitted buildings at LANL.

Construction of structural modifications such as installing additional seismic bracing would be subject to a NEPA review; this type of facility-specific review if pertaining to implementing pit fabrication decisions would be tiered from programmatic decisions established in the SSM ROD.

While the incidents and studies pointed out in this issue postdate issuance of the SSM PEIS and SSM ROD, actions pertaining solely to budgeting, project management, personnel reorganizations, and developing design standards would not be subject to NEPA. Implementing specific actions pertaining to operational safety or seismic upgrades may be subject to NEPA; however, these would be project-specific NEPA reviews tiered from the SSM analysis, if applicable, and are not germane to programmatic decisions regarding locating the pit fabrication mission.

5. Accidents involving Pu-238. That the PEIS omitted any analysis of accident consequences involving release of Pu-238, where information indicates that two-thirds of the PF-4 space at TA-55 slated for processing Pu-238 would be located in the same building as pit fabrication activities.

The Paine Affidavit, Paragraph 24, refers to alleged new information, Attachment J, that is claimed to shed new light on the accident consequences of processing Pu-238 at TA-55, PF-4. Following completion of the SSM PEIS and assignment of pit fabrication to LANL in the SSM ROD, as part of its site-specific studies to develop an approach to implementing the pit fabrication mission, LANL considered various alternative ways to allocate office and laboratory space at TA-55 and CMR among the various ongoing and newly-assigned missions. The results of that feasibility study were documented in "Alternative for Increasing the Nuclear Materials Processing Space at Los Alamos for Future Missions" [LA-UR-97-1000, April 25, 1997, A.R. No. VII.B-30], which was included as Attachment J to the Paine Affidavit. The feasibility study included, as introductory material in the section cited by Plaintiffs, a summary of the different then-current missions and then-existing space allocations in TA-55. This summary information on mission assignments was not new, and, as explained below, was available to the SSM decisionmaker at the time the SSM ROD was prepared. The feasibility study was included as an attachment to the draft ECDR sent in July 1997 to DOE and DNFSB; the ECDR has not yet been finalized.

LANL carries out Pu-238 operations in TA-55, PF-4, including the manufacture of Pu-238 heat sources for the National Aeronautics and Space Administration (NASA) deep space missions, and has done so for many years under projects such as the Cassini Project ["Environmental Assessment for Radioisotopic Heat Source Fuel Processing and Fabrication," DOE Offices of Special Applications, Assistant Secretary for Space and Defense Energy Systems, DOE/EA-0534, A.R. No. VII.B-3; FONSI 56 FR 34057, July 25, 1991, A.R. No. VII.B-4; "EIS for the Cassini Mission," Solar System Exploration Division, Office of Space Science, NASA, June 1995, A.R. No.

VII.B-19; see also Final Supplemental EIS for the Cassini Mission, NASA, June 1997, A.R. No. VII.B-32]. The use of plutonium laboratory floor space at TA-55, PF-4 for Pu-238 work associated with the Cassini mission, including the consequences of release of radiological materials under normal or accident conditions, was specifically assessed in the 1991 EA [DOE/EA-0534, Sec. 4.2.1, p. 4-3; Sec. 6.2.1.2, p. 6-3; Sec. 6.2.2, p. 6-4; FONSI 56 FR 34059]; DOE subsequently implemented this work essentially as described in the EA except that the period of operations for the Cassini project extended until 1996 instead of 1994 as projected in the 1991 EA due to overall project delays. The information regarding collocation of Pu-238 work with other Pu work at TA-55, PF-4, has been in the public venue since mid-1991 and does not represent "new information."

where's the accident analysis

The cumulative radiological impacts of collocating Cassini work and pit processing was mentioned in the SSM PEIS [SSM PEIS, Vol. IV, comment response 11.07]. LANL has always had a limited capacity to manufacture pits [see, for example, SSM PEIS, Vol. IV, response to comment summary 32.12, p. 3-84; and reply to Question 15a from the NRDC questions "Pit Production at Los Alamos: Questions Concerning Environment, Safety and Health Issues," November 1997]. The ongoing mix of plutonium operations at TA-55, which include among other things the current pit fabrication work, Pu-238 operations, and plutonium research and development to support LANL's national security and environmental management missions, was included in the No Action Alternative in the SSM PEIS; the pit production mission is not expected to result in any changes to the PF-4 areas involved in Pu-238 work. DOE continues to conduct these ongoing activities and has in place procedures to assure that new activities will be subject to rigorous safety reviews (which among other things assess the risk of collocating new activities with ongoing operations) before any new activities would be allowed to begin. Therefore, information regarding the collocation of ongoing Pu-238 activities and proposed pit fabrication activities was available to the SSM decisionmaker at the time the SSM ROD was issued. The SSM PEIS provided a programmatic analysis to compare impacts of pit fabrication that would be expected if located at LANL or SRS; it was intended that site-specific impacts of implementing programmatic mission assignments (including the cumulative effects of collocated missions at TA-55) would be analyzed in subsequent tiered NEPA documentation [SSM PEIS, Vol. I, Sec. 1.5, p. 1-8].

The accident analyses of the SSM PEIS were explained in detail in Appendix F, which stated that the issues regarding health risks were twofold: to determine whether accidents at specific facilities would pose unacceptable risks; and which alternative locations would provide an advantage of lesser risk [SSM PEIS, Vol. II, Sec. F.1.1, p. F-1]. The SSM PEIS also acknowledged that specifics regarding measures to reduce risk would be contained in subsequent tiered NEPA reviews, project-specific design reviews, and facility-specific safety analysis reports [SSM PEIS, Sec. F.1.1, p F-2]. The source documents reviewed [SSM PEIS, Vol. II, Table F.1.1-1] made reference to the presence of Pu-238 at TA-55. The SSM PEIS provides a bounding accident analysis and compares the potential health effects from different accident scenarios at LANL and SRS [SSM PEIS, Vol. II, Sec. F.2.3, p. F-16]. [See also SSM PEIS Vol. IV, response to comment 11.08, p. 3-107; and 11.42, p. 3-54.]

The decisionmaker had relevant information available regarding the comparative risk of placing pit fabrication activities at LANL or SRS (including that of collocating pit fabrications activities in the same building as Pu-238 activities), and whether or not the accident risk at any given facility was unacceptable. DOE is obligated to operate TA-55 at LANL in a safe operating configuration (including ongoing activities with Pu-238) regardless of the incremental effect of placing pit fabrication activities at that facility. The decisionmaker knew that Pu-238 activities take place at TA-55, and the decisionmaker weighed whether or not the incremental addition of adding pit fabrication operations to TA-55 posed an unacceptable risk.

This issue was addressed previously in this litigation in the Second Declaration of Albert E. Whiteman. He stated that it has always been acknowledged that Pu-238 operations are carried out in TA-55 PF-4, and are addressed in the TA-55 Safety Analysis Report, A.R. No. I-1124, I-1125 [Second Declaration of Albert E. Whiteman, p. 28]. He stated Pu-238 processes are housed in the north half of PF-4 while pit manufacturing processes are housed in the south half, and discusses safety and accident considerations [Second Declaration, p. 28, 29].

This issue does not present new information that was not available to the SSM decisionmaker. Therefore, no change to the SSM PEIS is warranted.

Analysis of Issues Raised by DOE

1. Pit production strategy.

In September 1997 DOE initiated an evaluation of the potential for fabricating pits in the near-term without displacing other ongoing activities in TA-55. A modified strategy was approved by DOE HQ in December 1997 and transmitted from DOE AL to LANL in January 1998. The strategy in general addressed engineering project management, scheduling, and logistics issues. CMR and Sigma facilities would continue to support pit production. [Memorandum, Whiteman to Cunningham, January 12, 1998, A.R. No. VII.B-50; Attachment 1: memorandum, Ives to Twining, December 16, 1997, A.R. No. VII.B-46; Attachment 2: "Pit Production -- Baseline Program and Project Requirements and Assumptions."]

The three objectives of the modified strategy are:

(a) Decouple the CMIP project for pit fabrication from other projects and focus development of pit production capability at TA-55 without disrupting ongoing mission.
(b) Maintain pit production as a continuous process, and achieve an intermediate capacity of 20 pits per year by FY 2007 without prejudice to the eventual 50 pit per year capacity.
(c) Delay CMIP while performing urgent maintenance and equipment replacement beginning in FY 1999.

The modified strategy in general addresses engineering project management, scheduling, and logistics issues. These types of issues do not result in environmental impacts other than those from implementing the proposed actions, and are generally irrelevant to a NEPA review. The site-specific implementation of CMIP would be subject to project-specific NEPA review. DOE anticipates that the site-specific environmental impacts of implementing the CMIP project will be contained in the LANL SWEIS now under preparation.

The SSM PEIS acknowledged DOE's intent to further refine its plans to implement its programmatic decisions; the SSM PEIS and ROD discussed the two-tiered NEPA strategy and indicated that project-specific decisions on how to implement programmatic decisions would be analyzed in subsequent, tiered, NEPA reviews. DOE is now in the process of refining its plans for implementing the new pit fabrication mission at LANL, and at the same time continuing to carry out its prior pit fabrication missions.

Under the modified strategy, CMR and Sigma facilities would continue to support pit production. The use of these two facilities to support pit production was discussed in the SSM PEIS. As discussed above, the use of Sigma to manufacture nonnuclear pit components was analyzed by DOE in the Nonnuclear Consolidation EA, June 1993, and its related FONSI, September 1993. Implementation of that proposed action began in 1993.

Decoupling the CMIP project from other ongoing construction projects at LANL facilities is a project management (paperwork) activity that would not in itself result in additional environmental impacts. In any case, the CMIP project represents site-specific implementation of programmatic SSM decisions; in accordance with the SSM PEIS and ROD, site-specific implementation would be subject to subsequent, tiered NEPA review.

Maintaining pit production as a continuous process is a project management aspect of implementing this proposal. The comparison of environmental impacts, if any, from differential schedules for implementing pit production would be captured in the project-specific NEPA review for CMIP or its follow-on activities.

At the same time that they were considering implementation needs for CMIP, DOE and LANL considered the need to expedite certain planned activities at TA-55 so that they would occur prior to CMIP. These are maintenance actions and equipment upgrades that would be needed to conduct LANL's defense mission at TA-55 independent of

the pit fabrication mission. Maintenance actions and upgrades to existing equipment at TA-55 would be subject to project-specific NEPA review; the LANL SWEIS is anticipated to consider the cumulative impacts of operating TA-55 under different scenarios, and additional project-specific NEPA review may be needed for any proposed equipment upgrades at the time they are ripe for decision.

The modified strategy for implementing the pit fabrication mission at LANL, as captured in the CMIP project modifications, would be details of site-specific implementation that would not be germane to a programmatic decision to locate this mission. Because it was understood in the SSM PEIS that facilities such as TA-55 needed to be kept in safe operating condition regardless of whether or not LANL received the pit fabrication mission, this issue does not present new information that would bear on the programmatic pit fabrication siting decision. Tiered, project-specific NEPA reviews are planned to cover the CMIP project and improvements to related facilities. Therefore, no change to the SSM PEIS is warranted.

2. CMR project management considerations.

In the SSM PEIS, DOE acknowledged that it could not eliminate any of its weapons manufacturing and component surveillance capabilities [SSM PEIS, Vol. I, Sec. 2.4.2, p. 2-8], and would continue to need all the basic capabilities of its industrial and laboratory base regardless of its decisions to reestablish pit manufacturing capability [SSM PEIS, Vol. I, Sec 2.5, p. 2-10]. The need for analytical chemistry as part of the pit fabrication mission was described in Appendix A [SSM PEIS, Vol. II, Sec. A.3.3, p. A-117, and Figure A.3.3-1, p. A-118]. DOE also acknowledged that its SSM Program would continue to evolve as better information became available and technological advancements occur, and that these future advancements would be subject to future NEPA reviews [SSM PEIS, Vol. I, Sec. 2.5.1, p. 2-10]. One of the ongoing capabilities DOE continues to need in support of its nuclear weapons mission, and independently of any decision to site pit fabrication capabilities, is its analytical chemistry capability at CMR.

Over the past several years, and independent of the need to reestablish pit fabrication, DOE has planned to upgrade the CMR building to extend its useful life to meet ongoing LANL mission requirements. DOE prepared the CMR Upgrades EA [DOE/EA-1101, A.R. No. VII.B-27] and reached a FONSI for the proposed upgrades on February 11, 1997 [A.R. No. VII-B.28]. DOE and LANL immediately began to implement those proposed actions in a sequential manner. LANL was tasked with carrying out certain project management assignments to facilitate design and construction of the upgrades project. In early 1997 it became apparent that costs of the ongoing CMR upgrades project would, unless checked, overrun the FY97 budget. After considering budget, schedules and project management issues, DOE and LANL decided to temporarily suspend construction activities for the CMR upgrades project pending a thorough budget and project management review. [Memorandum, Cunningham to Whiteman, April 24, 1997, A.R. No. VII.B-29; memorandum, Whiteman to Cunningham, May 5, 1997, A.R. No. VII.B-31; letter, Reis to Senator Thurmond, June 19, 1997, A.R. No. VII.B-33; letter, Reis to Senator Domenici, June 19, 1997, A.R. No. VII.B-34. See also Second Declaration of Albert E. Whiteman, June 6, 1997, paragraph 4.g. (p. 8).] Following that review, the upgrades project resumed and upgrade construction activities are underway.

NEPA is a forecasting tool that projects the anticipated environmental impacts that would occur if proposed actions were implemented. The SSM PEIS projected the expected impacts if the pit fabrication mission were to be located at LANL, including use of the CMR Building to support that assignment. The CMR EA analyzed the impacts from constructing the CMR upgrades and the impacts of operating the upgraded CMR Building. The projection and analysis of potential environmental impacts is not dependent on project management considerations such as design and engineering costs, schedules, and skill. These are irrelevant to a NEPA analysis, although they are of interest for other reasons.

This issue raises new information, but not information that is germane to a NEPA review. Therefore, there is no need to supplement the existing NEPA reviews on the CMR upgrades project. The need for the CMR upgrades project is independent of the decision to reestablish pit fabrication at LANL. Therefore, the consideration of the

adequacy of the site-specific review of the CMR upgrades project is irrelevant to the programmatic decisions in the SSM PEIS, and does not represent a substantial change to the proposal analyzed in the SSM PEIS. Accordingly, no change to the SSM PEIS is warranted.

3. CMR safety reviews and organizational changes.

On September 2, 1997, in response to safety considerations, LANL temporarily suspended operations within the CMR building pending an in-depth review of all operations and procedures being implemented within the building to support on-going LANL missions. Operations were resumed over time in a phased manner as work control and work authorization procedures were verified for each on-going project within the building. [Memorandum, Gancartz to All CMR Occupants, September 2, 1997, A.R. No. VII.B-38; memorandum, Jackson to Todd, September 5, 1997, A.R. No. VII.B-39.] To further improve operation of the CMR facility within a safe operating envelope for nuclear facilities, LANL Director Browne announced a new integrated management organization for CMR in which the technical, operations, and facility management of CMR would be integrated with that of TA-55. This reorganization became effective in January 1998. [E-mail memorandum, Browne to managers, December 17, 1997, A.R. No. VII.B-47; memorandum, Reis to All CMR and TA-55 Employees, December 19, 1997, A.R. No. VII.B-48; electronic LANL Newsbulletin, "News from John Browne, CMR and TA-55 Integration," January 7, 1998, A.R. No. VII.B-49.]

DOE needs to continue to operate CMR and its other nuclear facilities in a safe, secure manner in order to be able to perform its mission assignments. Operation and management of the CMR Facility is, to some extent, delegated to LANL under its management and operating contract with the DOE. Therefore, it is incumbent upon LANL managers to take actions they deem necessary to ensure that LANL facilities are operated safely and in compliance with operating authorizations.

That's why this one was made

Management actions such as facility organizational arrangements do not generally, in and of themselves, result in environmental impacts other than those of carrying out the work of the facility. The management actions taken to improve operations at the CMR Building present new information, but not information that is germane to a NEPA review. Consideration of improvements to the management structure at CMR would be a site-specific detail of implementing programmatic mission assignments from the SSM ROD. Therefore, no change to the SSM PEIS is warranted.

4. New earthquake faulting studies at LANL.

why is this not germane!

As discussed in Plaintiffs' Issue 4 above (consideration of the DNFSB safety concerns), in 1997, LANL geologists initiated a study of the interrelationship of three known geologic faults (Pajarito, Guaje Mountain, and Rendija Canyon faults) in the vicinity of LANL. The preliminary results of that draft study were presented to DOE management [Memorandum, October 28, 1997, Ives, DOE/HQ, to Manager, DOE AL, A.R. No. VII.B-41; Memorandum, Senazi to Trapp, November 13, 1997, A.R. No. VII.B-43; Attachment 1: memorandum, Ives to Manager, October 28, 1997, A.R. No. VII.B-41]. The results to date indicate a possible connection between the three faults, which would increase the likelihood of geologic rupture should a seismic event occur. This could indicate that many buildings in TA-3 would be vulnerable to damage if a seismic event occurred. DOE requires its sites to review seismic information at about ten year intervals to determine if there is any new information that would result in revising site management actions [DOE Order 420.1, Facility Safety, Sec. 4.4, Natural Phenomena Hazards Mitigation]; LANL has been performing site studies for several years in response to this requirement. Additionally, DOE is conducting an agency-wide review of seismic safety at all of its facilities in response to EO 12941, "Seismic Safety of Existing Federally Owned or Leased Buildings" [59 FR 62545, A.R. No. VII.B-16], and a related DOE implementing guidance memorandum of October 18, 1996 from the Assistant Secretary for Environment, Safety and Health. This report is due to the Federal Emergency Management Administration by December 1, 1998, and has not yet been issued.

The results of the preliminary studies and draft reports suggest that some LANL buildings could be vulnerable to damage in the event of certain seismic events. These studies indicate the need to consider revising building engineering standards at LANL. Promulgating design standards would not be subject to NEPA review, although implementation of any such standards may be. The LANL seismic studies do not indicate that the probability of an earthquake event is any more likely than previously thought; the SSM PEIS discussed the known moderate seismic risk at LANL [SSM PEIS, Vol. I, Sec. 4.6.3.5, p. 4-288; Vol. II, Appendix F, Sec. F.2.3.1, p. F-21, F-22; see also SSM PEIS Vol. I, Glossary, definition of "capable fault," p. 9-3]. These studies indicate, however, that DOE, LANL and safety agencies must come to agreement on the amount of seismic protection needed for new and retrofitted buildings at LANL.

The SSM PEIS considered release of radioactive materials in a seismic accident event and this information was considered by the decisionmaker when deciding to site the pit fabrication mission at LANL. While new seismic studies now underway appear to indicate that there is a need to invest in greater seismic retrofitting to protect building infrastructure, these new studies do not indicate that there would be a greater frequency of seismic events. If new standards are promulgated, buildings at LANL would need to be retrofitted to ensure continuation of safe secure operations to perform ongoing mission requirements regardless of the decision to site the pit fabrication mission at LANL.

The SSM PEIS analyzed the safety and health impacts if a seismic event occurred (regardless of the projected likelihood of this event occurring) and massive structural damage resulted in a release of radioactive materials. The new studies ongoing at LANL do not indicate any preliminary information that would result in a change to the accident analysis presented in the SSM PEIS. Construction activities related to structural modifications would be site-specific actions irrelevant to the programmatic questions considered in the SSM PEIS. Therefore no change to the SSM PEIS is warranted.

CONCLUSIONS

These Issues Do Not Change the SSM PEIS Analysis

The nine issues considered in this Supplement Analysis were either covered in the SSM PEIS and so were available to the decisionmaker; were project-specific issues related to the implementation of SSM decisions at LANL and so would be subject to subsequent tiered NEPA review and decisionmaking; or were preliminary information and so would be subject to future review at such time as they are ripe for decision. Therefore, none of these issues would result in a need to change the SSM PEIS analysis of pit fabrication.

These Issues Do Not Change the SSM ROD

The SSM ROD was based in part on the environmental analysis in the SSM PEIS and in part on other factors. None of the issues raised in the Paine Affidavit, or in the related information considered by DOE, bring forth salient new information bearing on programmatic decisions for siting the reestablished pit fabrication mission of which the decisionmaker was unaware at the time the SSM ROD was issued. Therefore, none of these issues would result in a need to change or amend the programmatic SSM ROD.

RECOMMENDATIONS

Based on the analysis of the issues raised by plaintiff in the Paine Affidavit, DOE does not see any need to supplement the SSM PEIS analysis of reestablishing the former RFP pit fabrication mission at LANL to provide an enhanced pit manufacturing capability. DOE does not believe that any new proposals have emerged which would require preparation of a new EIS at this time. DOE recommends that the SSM PEIS analysis of reestablishing pit fabrication at LANL be left standing and that no additional NEPA reviews, apart from those already planned in the LANL SWEIS or elsewhere, be initiated at this time.

Date: _____

_____ Approved

_____ Disapproved

_____

Victor H. Reis, Assistant Secretary for Defense Programs