



## DEPARTMENT OF ENERGY

### National Nuclear Security Administration

#### **Notice of Intent to Prepare a Supplemental Environmental Impact Statement for Enhanced Plutonium Facility Utilization at Lawrence Livermore National Laboratory in Livermore, California**

**AGENCY:** National Nuclear Security Administration, Department of Energy.

**ACTION:** Notice of intent.

**SUMMARY:** The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the United States (U.S.) Department of Energy (DOE), announces its intent to prepare a Supplemental Environmental Impact Statement (SEIS) for Enhanced Plutonium Facility Utilization at Lawrence Livermore National Laboratory (LLNL or Laboratory) in Livermore, California (DOE/EIS-0547-S1), tiered from the 2023 LLNL Site-Wide Environmental Impact Statement (SWEIS) (2023 LLNL SWEIS)(DOE/EIS-0547). The Record of Decision (ROD) for the 2023 LLNL SWEIS was published on February 20, 2024. The ROD implemented the Proposed Action Alternative in the SWEIS and is the baseline for this SEIS. NNSA will prepare the SEIS and will analyze the potential environmental impacts of enhanced plutonium facility utilization, other reasonable alternatives that may be identified, and the baseline operations as discussed in the 2023 LLNL SWEIS. The purpose of this Notice is to invite public participation in the SEIS process and to encourage public involvement on the scope, any environmental issues, and alternatives that NNSA should consider in the draft SEIS.

**DATES:** NNSA invites other Federal agencies, Native American Tribes, State and local governments, industry, other organizations, and members of the public to review and submit comments on the scope and alternatives of the LLNL SEIS through [*INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER*]. Comments received after this date will be considered to the extent practicable. NNSA will hold one virtual public

scoping meeting. The date of the meeting will be provided in a future notice posted on the following website: <https://www.energy.gov/nnsa/nnsa-nepa-reading-room>. NNSA will hold the meeting no earlier than 15 days from the posting of the notice. Public scoping meeting dates and details will also be announced in local media outlets.

**ADDRESSES:** Written and oral comments will be given equal weight and NNSA will consider all comments received or postmarked by the end of the comment period in preparing the draft SEIS. Comments received or postmarked after the comment period will be considered to the extent practicable. Written comments on the scope of the SEIS or requests for information related to the SEIS should be sent to: Alan Chen, NEPA Document Manager, National Nuclear Security Administration, Livermore Field Office, 7000 East Avenue, L-293, Livermore, CA 94550-9234 or email to: [LLNLSEIS@nnsa.doe.gov](mailto:LLNLSEIS@nnsa.doe.gov). Before including your address, phone number, email address, or other personally identifiable information in your comment, please be advised that your entire comment—including your personally identifiable information—may be made publicly available. If you wish for NNSA to withhold your name and/or other personally identifiable information, please state this prominently at the beginning of your comment. You may also submit comments anonymously.

Information related to the virtual public scoping meeting, including internet and telephone access details, and instructions on how to participate will be available at the following website:

<https://www.energy.gov/nnsa/nnsa-nepa-reading-room> and announced in local media outlets.

**FOR FURTHER INFORMATION CONTACT:** For additional information about this Notice, please contact Alan Chen, NEPA Document Manager, National Nuclear Security Administration, Livermore Field Office, 7000 East Avenue, L-293, Livermore, CA 94550-9234; telephone: 833-778-0508; or email to: [LLNLSEIS@nnsa.doe.gov](mailto:LLNLSEIS@nnsa.doe.gov).

#### **SUPPLEMENTARY INFORMATION:**

##### **Background**

The Nuclear Security Enterprise is currently performing the highest throughput of work in over 30 years, which includes plutonium (Pu) research and development (R&D). As the weapons in the Nation's nuclear stockpile continue to age beyond their original design lifetime, an increased amount of experimental data developed through Pu R&D is necessary to continue NNSA's science-based stewardship of the nuclear weapons stockpile. NNSA has a need for additional R&D space or enhanced utilization of existing R&D space due to new and evolving international security concerns. This enhanced utilization is critical to NNSA's Stockpile Stewardship and Management Program (SSMP), to preventing the spread and use of nuclear weapons worldwide, and to many other areas that may impact national security and global stability.

The LLNL Plutonium Facility has been in operation since the 1960s. Its mission is to support the nuclear weapons program through research in the physical, metallurgical, and chemical properties of Pu, including aging, dismantlement, and disposition in support of stockpile stewardship, as well as fabrication, testing, and assembly of plutonium device parts in support of experimental activities. The Pu Facility is part of the LLNL Superblock, which includes several supporting R&D facilities within the 770-acre laboratory site in Livermore, California (Livermore Site). The Livermore Site is situated about 50 miles east of San Francisco in southeastern Alameda County.

### **Mission**

The 21st century presents a growing set of challenges that are the focus of the Laboratory's mission as an NNSA national security laboratory. National security policies require DOE, through NNSA, to maintain the U.S. nuclear weapons stockpile and the Nation's core competencies in nuclear weapons. NNSA has the mission to maintain and enhance the safety, security, and effectiveness of the nuclear weapons stockpile. The 2022 Nuclear Posture Review stated that an effective, responsive, and resilient nuclear weapons infrastructure is essential to the U.S. capacity to adapt to shifting requirements, and to support the sustainment of its nuclear

forces to protect the homeland, assure allies, deter adversaries, and hedge against adverse developments.

LLNL's defining responsibility is ensuring the safety, security, and reliability of the Nation's nuclear deterrent. LLNL's mission is broader than stockpile stewardship and also includes missions that respond to national security and global security concerns that range from nuclear proliferation and terrorism to energy shortages and climate change. The Laboratory's science and engineering capabilities are applied to these challenges. Programs at LLNL support DOE; NNSA; the Department of Defense; the Department of Homeland Security; other Federal, State and local agencies; private and academic sponsors; and other scientific institutions.

The Strategic Deterrence Program (previously the Weapons and Complex Integration or WCI Program in the 2023 LLNL SWEIS) at LLNL works to ensure that the Nation's nuclear deterrent remains safe, secure, and reliable. The program accomplishes this through the SSMP—an ongoing effort to apply a science-based fundamental understanding of nuclear weapons performance—from the development of enhanced warhead surveillance tools that detect the onset of problems to manufacturing capabilities that produce critical components and the use of high-performance computational capabilities.

### **Purpose and Need for Agency Action**

As U.S. nuclear weapons continue to age beyond their original design lifetime, an increased amount of experimental data developed through Pu R&D is necessary to continue the science-based stewardship of the nuclear weapons stockpile. NNSA has a need for additional R&D space due to new and evolving international security concerns. NNSA is constrained in Pu R&D space, and the Pu Facility R&D capabilities at LLNL could be better optimized in support of mission areas including designs of the nuclear explosives package for Life Extension Programs, Modification Programs, and Alteration programs, as well as certifications of weapons as they enter the stockpile. There is a need to perform enhanced utilization of Pu R&D operations at the

LLNL Plutonium Facility from Security Category (CAT) III operational levels to CAT II operations.

The LLNL Pu Facility was originally built and operated as a Security CAT I facility and is the only immediately available facility with the capacity and capability to conduct this required Security CAT II work. Increasing Pu R&D floorspace through construction of a new Security CAT I or II facility could take decades, while re-establishment of Security CAT II operations at the LLNL Plutonium Facility may take approximately five years.

By the end of 2012, NNSA removed excess Pu inventories as part of the De-Inventory Project, resulting in the LLNL Pu Facility operating at Security CAT III operational levels as this appeared to be an effective level of support for that time. However, the limitations of Security CAT III operations at LLNL are now insufficient for NNSA's Pu R&D requirements. NNSA will be able to fulfill its current and potential future national security requirements in a timely manner by enhancing the utilization of the LLNL Pu Facility to Security CAT II operational levels.

### **Requirements To Fulfill DOE NEPA Compliance**

The SEIS will be prepared pursuant to the *National Environmental Policy Act* (NEPA) of 1969, as amended (42 U.S.C. 4321 *et seq.*), the Council on Environmental Quality's NEPA regulations (40 CFR parts 1500 through 1508), the DOE NEPA Implementing Procedures (10 CFR part 1021), and NNSA policy document NAP 451.1, *National Environmental Policy Act Compliance Program*. The DOE regulations (10 CFR 1021.314, *Supplemental Environmental Impact Statements*) require preparation of a supplement to an EIS if there are substantial changes or significant new circumstances and information relevant to environmental concerns. The SEIS will be prepared in the same manner as a draft or final EIS and will provide the public with an analysis of the potential environmental impacts from reasonable alternatives. The SEIS would utilize the 2023 LLNL SWEIS for baseline data for ongoing Security CAT III operations.

The NEPA process allows for all interested agencies (Federal, State, and local), Native American Tribes, public interest groups, local businesses, and members of the general public to participate in the environmental review process. Although the scoping process is optional for an SEIS per 10 CFR 1021.314 (d), NNSA has decided to include scoping to inform interested members of the public.

### **Preliminary Alternatives**

The NEPA public scoping process is an opportunity for the public to assist NNSA in determining a reasonable range of alternatives and potential environmental issues for analyses. NNSA welcomes specific comments or suggestions on the content of these alternatives, or on other alternatives that could be considered. A preliminary set of alternatives and environmental issues for evaluation in the SEIS are identified below. Additionally, during the development of the SEIS, NNSA may consider other alternatives that are reasonable and that fulfill the purpose and need for agency action.

### **Proposed Action Alternative (Enhanced Plutonium Facility Utilization)**

The SEIS would continue ongoing operations at the LLNL Superblock and would add several new actions to support the enhanced Pu facility utilization. These include: (1) increasing the amount of fissile materials for R&D activities, (2) upgrading the security categorization of the LLNL Pu Facility from Security CAT III to Security CAT II, (3) conducting infrastructure construction activities, (4) increasing materials shipments and waste generation/shipments during operations, and (5) adding operational and security personnel to support Security CAT II operations.

### **No Action Alternative (Continuing Present Operations)**

The No Action Alternative would continue current facility (CAT III) operations at the Superblock as described in the 2023 LLNL SWEIS.

### **Other Potential Reasonable Alternatives**

NNSA welcomes input on alternatives to be analyzed in the SEIS that the public thinks are reasonable and that fulfill the purpose and need for agency action. Alternatives that NNSA will not consider as reasonable are closure of the Superblock and transfer of current missions/operations from Superblock to other NNSA sites, as those actions would be inconsistent with the purpose and need defined by NNSA. NNSA will identify the environmentally preferable alternative from the list of alternatives analyzed in the SEIS.

### **Preliminary Environmental Analysis**

The following issues have been identified for analysis in the SEIS. The list is tentative and intended to facilitate public comment on the scope of the SEIS. It is not intended to be all-inclusive, nor does it imply any predetermination of potential impacts. The NNSA specifically invites suggestions for the addition or deletion of items on this list.

1. Potential effects on the public and workers from exposures to radiological and hazardous materials during normal operations, construction, reasonably foreseeable accidents, and intentional destructive acts.
2. Impacts on water resources, including floodplains and wetlands.
3. Impacts on air quality, climate, and greenhouse gases.
4. Impacts to plants and animals and their habitat, including species which are federally- or State-listed as threatened or endangered, or of special concern.
5. Impacts on soil.
6. Impacts to cultural resources such as those that are historic and paleontological.
7. Socioeconomic impacts to affected communities.
8. Environmental justice, including impacts to minority and low-income populations.
9. Potential impacts on land use and applicable plans and policies.
10. Impacts from traffic and transportation of radiological and hazardous materials and waste to and from the LLNL Site.
11. Materials and waste management activities.

12. Impacts on visual aesthetics and noise levels from the Superblock on the surrounding communities and ambient environment.
13. Impacts to community services, including fire protection, police protection, schools, and solid waste disposal in landfills.
14. Impacts from use of utilities, including water and electricity consumption, fuel use, sewer discharges, and resource conservation.
15. Impacts from site contamination, characterization, and remediation.
16. Unavoidable adverse impacts due to natural phenomena (*e.g.*, floods, earthquakes, etc.).
17. Environmental compliance and inadvertent releases.
18. Short-term uses and long-term productivity.
19. Irreversible and irretrievable commitment of resources.
20. Cumulative effects of past, present, and future operations.
21. Mitigation commitments.

### **SEIS Process**

The SEIS scoping process is intended to involve all interested agencies (Federal, State, and local), Native American Tribes, public interest groups, local businesses, and members of the general public. Interested parties are invited to participate in the SEIS process and to refine the preliminary alternatives and environmental issues that are reasonable. An SEIS scoping meeting will be scheduled, and all interested parties will be invited to assist the NNSA in refining alternatives and defining the scope of the SEIS analyses.

Following the scoping process announced in this Notice, and after consideration of comments received during scoping, NNSA will prepare a Draft SEIS. NNSA will announce the availability of the Draft SEIS in the *Federal Register* and local media outlets. NNSA will hold one or more public hearings for the Draft SEIS. Any comments received on the Draft SEIS will be considered and addressed in the Final SEIS. NNSA will then issue a ROD no sooner than 30

days after publication by the Environmental Protection Agency of a Notice of Availability of the Final SEIS.

### **Relationship to Existing and Other NEPA Analyses**

The following references provide previous NEPA analyses; these are related to Plutonium Facility operations:

- The ROD for the 2023 LLNL SWEIS (DOE/EIS-0547; 89 FR 12831) for continued operations of LLNL was issued in February 2024. This was the conclusion of a process involving detailed analysis, public involvement, and document preparation. In particular, the 2023 SWEIS analyzed Superblock operations at Security CAT III operations and Hazard Category 2 levels.
- In 2011, NNSA prepared a Supplement Analysis (SA) (DOE/EIS-0348-SA-03) to the 2005 LLNL SWEIS (DOE/EIS-0348; DOE/EIS-0236-S3) which stated the ongoing De-Inventory Project would decrease the amount of Special Nuclear Material (SNM) in long-term storage onsite and continue the transfer of Security Category I/II SNM from LLNL to receiver sites through the end of 2012.
- In 2008, NNSA completed the Complex Transformation Supplemental Programmatic EIS (DOE/EIS-0236-S4) which stated that NNSA would continue on-going activities to transfer Security CAT I/II SNM from LLNL under the No Action Alternative and phase out Security CAT I/II operations at LLNL by the end of 2012.
- In 2007, NNSA completed a Supplement Analysis and an amended ROD (72 FR 51807) on the Storage and Disposition of Weapons-Usable Fissile Materials EIS (DOE/EIS-0229, DOE/EIS-0229-SA-04), which analyzed consolidating storage of surplus, non-pit weapons usable plutonium from LLNL, Los Alamos National Laboratory, and Hanford to Savannah River Site.

- The 2005 LLNL SWEIS (DOE/EIS-0348) and its corresponding ROD (70 FR 71491) analyzed the impacts of continued operations at LLNL, including Superblock operations at Security CAT I levels (NNSA 2005).
- In 2024, NNSA completed an SA (DOE/EIS-0426-SA-01) and an amended ROD (89 FR 61104) on the SWEIS for the Continued Operation of the DOE/NNSA Nevada National Security Site (NNSS) and Off-Site Locations in the State of Nevada. NNSS provides Pu target material shipments to and from the LLNL Superblock for R&D experiments.

### **EIS Preparation and Schedule**

NNSA expects to issue the Draft SEIS by the end of summer 2025.

### **Signing Authority**

This document of the Department of Energy was signed on this 16th day of December 2024, by Jill Hruby, Under Secretary for Nuclear Security and NNSA Administrator, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC on January 7, 2025.

**Treena V. Garrett,**  
*Federal Register Liaison Officer,*  
*U.S. Department of Energy.*

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