

U.S. Department of Energy

Categorical Exclusion Determination Form

Proposed Action Title: Categorical Exclusion Determination for Outdoor, Small- and Pilot-Scale Research and Development (LB-CX-22-04)

Program or Field Office: Berkeley Site Office

Location(s) (City/County/State): Berkeley, California, and other DOE-operated facilities and ancillary facilities associated with Lawrence Berkeley National Laboratory (LBNL)

Proposed Action Description:

Lawrence Berkeley National Laboratory is a multi-program scientific research campus managed and operated by the University of California (UC) for the U.S. Department of Energy (DOE). The DOE Berkeley Site Office (BSO) proposes that LBNL continue conducting ongoing outdoor, small- and pilot-scale research and development activities involving advanced materials, biological and ecological systems, water quality, energy and climate sciences, national security, and related disciplines at its main hill site and various offsite locations. This CX determination assesses continued outdoor research operations by LBNL over the next approximately five-year period.

At present, the LBNL main hill site occupies 202 acres and includes approximately 150 buildings and support structures. Buildings include wet and dry laboratories, accelerators, shops and manufacturing spaces, offices, and support services facilities, and seven national "user facilities." LBNL research and office work is also conducted in off-site locations, including the UC Berkeley campus (primarily) and other UC campuses, commercially leased space in nearby cities, and various field locations. Field locations include, but are not limited to: the Sanford Underground Research Facility in South Dakota and other areas such as exterior urban and paved areas; various public and private partner locations; forests; deserts; estuarine, river, and marine environments; underground spaces; various atmospheric layers; and outer space. The proposed action supports DOE's research mission by conducting unclassified research to reach a deeper understanding of the physical universe and deliver science-based solutions to problems of national significance.

This proposed action would involve outdoor research – typically of an ecological or environmental nature – in a small area or limited group of small areas (generally less than 5 acres), including, but not limited to, siting, construction, and operation of a small-scale laboratory structure, outdoor test bed, or renovation of a room in an existing building for associated analysis. Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resulting environmental disturbance. Proposed outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment would be under controlled conditions. Covered actions would not involve source, special nuclear, or byproduct materials, except encapsulated sources manufactured to applicable standards that contain source, special nuclear, or byproduct materials may be used for nondestructive actions such as detector/sensor development and testing and first responder field training. Small-scale, temporary surveying, site characterization, and research activities in aquatic environments would be limited to areas as defined in 10 CFR Part 1021, Subpart D, Appendix B (B3.16). The proposed actions would be in accordance with applicable requirements in the proposed project area and would incorporate appropriate control technologies and best management practices.

All LBNL scientific research is conducted under carefully controlled conditions and with oversight from the DOE and LBNL's Environment, Health, and Safety (EH&S) Division. Research activities comply with all applicable federal, state, and local laws, regulations, and procedures. All operations and activities ancillary to the actual research, including procuring and receiving supplies and chemicals, training and equipping scientific staff and support personnel, and disposing of post-research materials, are similarly controlled and monitored and in compliance with applicable laws, regulations, and procedures.

The proposed outdoor, small- and pilot-scale research and development proposed actions would be reviewed in accordance with the National Historic Preservation Act and would not result in an adverse effect to historic properties included or eligible for inclusion in the National Register of Historic Places (National Register). If the proposed actions would have an adverse effect on properties included or eligible for inclusion in the National Register, DOE would consult with the State Historic Preservation Officer (SHPO) and other consulting parties and initiate actions specified in procedures set forth in the Advisory Council's regulations in 36 CFR Part 800.

Although an action might fall under the category of "outdoor, small and pilot-scale research and development," the action or related/cumulative effect of the action may in some circumstances have the potential to result in an unusual or significant environmental impact. In such cases, further NEPA review would be conducted and a higher level of NEPA documentation may be warranted.

Description of the Affected Environment

The LBNL main hill site is approximately 200 acres straddling the border between the cities of Berkeley and Oakland in Alameda County, California. It is located in the East Bay hills adjacent to the UC Berkeley campus. LBNL's off-site facilities include leased building spaces used for research and office activities; these are mainly located in commercial areas of the San Francisco bay area, including in the cities of Berkeley, Emeryville, Oakland, and Walnut Creek. Other LBNL-used space is located on institutional property at the UC Berkeley campus and the City of Richmond. Outdoor research conducted by LBNL - particularly small-scale field research covered under this CX analysis - is conducted at more remote and distant locations as identified above. These include various terrestrial, aquatic, and atmospheric environments that may be in a natural, disturbed, or developed state.

Categorical Exclusion(s) Applied:

- A9 – Information gathering, analysis, and dissemination
- A11 – Technical advice and assistance to organizations
- B1.2 – Training exercises and simulations
- B1.8 – Screened water intake and outflow structures
- B1.11 – Fencing
- B1.19 - Microwave, meteorological, and radio towers
- B1.31 – Installation or relocation of machinery and equipment
- B3.1 – Site characterization and environmental monitoring
- B3.2 -Aviation activities
- B3.3 - Research related to conservation of fish, wildlife, and cultural resources
- B3.7 - New terrestrial infill exploratory and experimental wells
- B3.8 - Outdoor terrestrial ecological and environmental research
- B3.9 - Projects to reduce emissions and waste generation
- B3.11 - Outdoor tests and experiments on materials and equipment components
- B3.16 - Research activities in aquatic environments
- B5.13 - Experimental wells for injection of small quantities of carbon dioxide
- B5.25 - Small-scale renewable energy research and development and pilot projects in aquatic environments
- B5.13 - Experimental wells for injection of small quantities of carbon dioxide
- 5.16 - Solar photovoltaic systems
- 5.17 - Solar thermal systems
- 5.18 – Wind Turbines
- 5.22 – Alternative fuel vehicle fueling stations
- 5.23 – Electric vehicle charging stations

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D.

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

I concur that the above description accurately describes the proposed action.

**LBNL Sr. Site &
Environmental Planner:**



Jeff Philliber

Dec 22, 2021

Date Determined

[Click here to enter a date.](#)

**BASO NEPA Program
Manager:**

Jose Roldan

Date Determined

The above description accurately describes the proposed action, which reflects the requirements of the CX cited above. Therefore, I recommend that the proposed action be categorically excluded from further NEPA review and documentation.

**BASO NEPA Program
Manager:**

Mary Gross

[Click here to enter a date.](#)

Date Determined

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1 B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

**NEPA Compliance
Officer:**

Peter Siebach

[Click here to enter a date.](#)

Date Determined