



U.S. Department of Energy Categorical Exclusion Determination Form

Proposed Action Title: Mechanical Plant Maintenance Upgrades (LB-CX-21-06)

Program or Field Office: Bay Area Site Office, Lawrence Berkeley National Laboratory

Location(s) (City/County/State): Berkeley, California

Proposed Action Description: The US Department of Energy (DOE) proposes to perform mechanical replacements and/or upgrades to the Bldg. 43 compressed air and the Bldg. 2 cooling systems at the Lawrence Berkeley National Laboratory (LBNL, or Berkeley Lab) in Berkeley, California. These actions would address deficient and aged mechanical systems that are essential to several Berkeley Lab research facilities. The need to address these systems was identified in LBNL's 2018 Annual Condition Assessment and Deferred Maintenance Prioritization Program. Project activities would include removal and disposal of retired equipment; minor grading and installation of pads and footings; construction or installation of new equipment; and operation of the new mechanical systems.

Both Buildings 2 and 43 are medially situated in the central portion of the 202-acre LBNL site in an area known as "Old Town" or "Charter Hill." The general vicinity is heavily developed and features a relatively high level of activity, including Advanced Light Source (ALS, in Bldg. 6) operations, the on-going Old Town Demolition project, and the forthcoming multi-year ALS-U upgrade project. See Figures 1 and 2 for site and project details.

Building 43 compressed air system activities would replace and modernize indoor compressors, air dryers, and HVAC equipment. An existing air tank adjacent to the building would be replaced, and an additional air tank would be installed nearby to augment capacity. Building 43 is east of Bldg. 6 and contiguous with Bldg. 45, the Lab's on-site fire station. The existing and proposed new air tanks are/would be located on pads on a developed area immediately north of Bldg. 43.

Building 2 cooling system activities would create dedicated cooling capabilities (e.g., provide chilled and low-conductivity water) for Buildings 2 and 43. Those buildings currently rely on the nearby Bldg. 37 cooling plant, which also serves Bldg. 6 among other facilities, and which is at times overtaxed. The project would install outdoor equipment on concrete pads and footings on a heavily disturbed slope adjacent to Bldg. 2. This new equipment would include a 16-foot-tall cooling plant and associated pumps, water filtration, and control systems. Building 2 is west of Bldg. 6 and adjacent to the proposed new cooling system location. The new cooling equipment area is steeply sloped and surrounded by Bldg. 2 to the north; an approximately 16-foot-tall retaining wall, Parking Lot "Y", and Buildings 80 and 6 to the east; and a dense grove of oak trees, Bldg. 23 (Guest House), and Lawrence Road to the south and west.

Work is expected to begin in late 2022 and to end in early 2024. Approximately six concrete truck trips would be required over this time period, along with occasional equipment delivery trucks and a peak of up to 20 daily construction workers on site. Construction work would take place during normal business hours and days. No disturbance of undeveloped natural areas would be required; no tree removal is expected. All applicable LBNL "Standard Project Features" to minimize environmental effects would be employed by the project. Dust control would be implemented and all necessary permits would be secured from the Bay Area Air Quality Management District. Construction truck trips would be managed by Berkeley Lab's Construction Coordinator to ensure that all construction trucks accessing the Berkeley Lab campus would stay well below significance thresholds. All equipment to be removed and all soil to be disturbed would be inspected and characterized for the presence of hazardous materials, including asbestos, lead-based paint, and PCBs. Any contaminants found would be abated and disposed of under the oversight of Berkeley Lab's EH&S specialists and in accordance with all applicable regulations and standards. Building 2 was constructed in 1988 and is not considered eligible for listing under the National Historic Preservation Act. Building 43 was constructed in 1979; it was evaluated by a qualified historian and found to be not eligible for NHPA listing; the Bldg. 43 compressor to be replaced was installed in 2014.

Categorical Exclusion(s) Applied:

B1.16 - Asbestos removal

B1.17 - Polychlorinated biphenyl removal

B1.31 - Installation or relocation of machinery and equipment

B1.34 - Lead-based paint containment, removal, and disposal

B1.3 - Routine maintenance

B1.33 - Stormwater runoff control

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 Environmental
Planner:**



Jeff Philliber

7/21/2021

Date Determined

**BASO NEPA Program
Manager:**

Click here to enter a
date.

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:**

Click here to enter a
date.

Mary Gross

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:**

Click here to enter a
date.

Peter Siebach

Date Determined

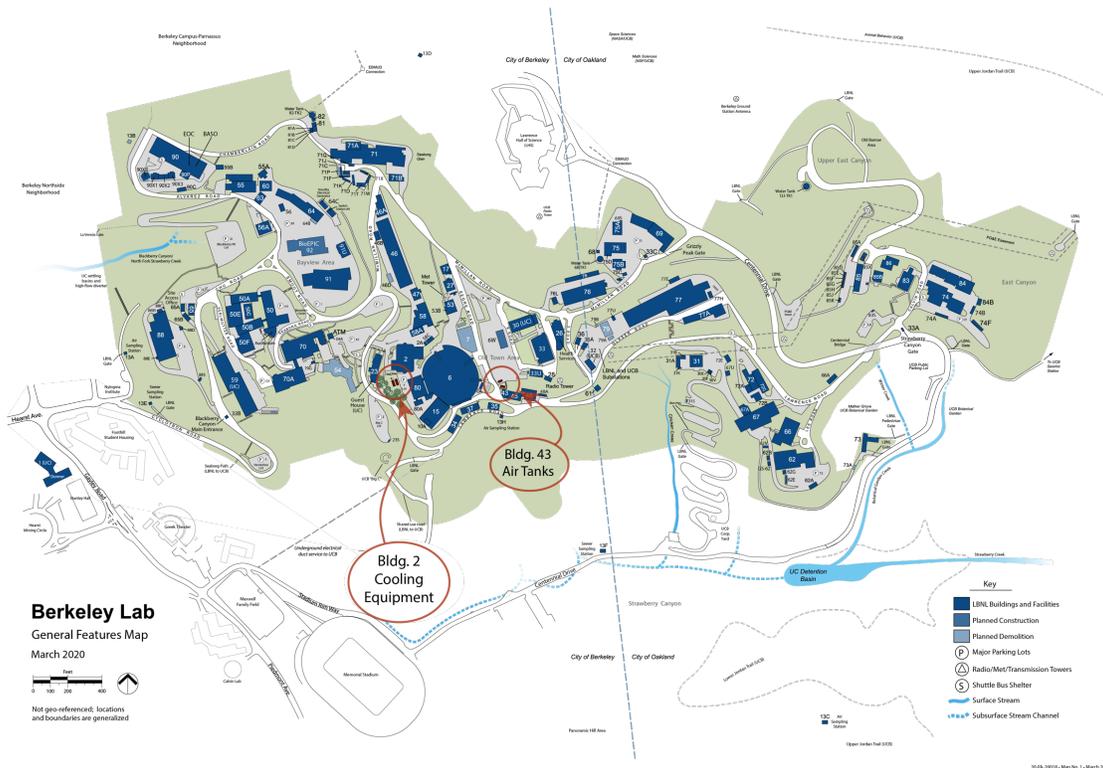


Figure 1: Berkeley Lab Site



Figure 2: Project Site