



# U.S. Department of Energy Categorical Exclusion Determination Form

Proposed Action Title: Construction and Operation of the B77A Addition at the Lawrence Berkeley National Laboratory  
LB-CX-18-01

Program or Field Office: Berkeley Site Office

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

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Proposed Action Description:

The U.S. Department of Energy (DOE) proposes to construct a one-story, 1,426-gross square foot (gsf) addition to Building 77A. The addition (see Figure 1) would accommodate existing and new fabricating equipment while freeing up existing space for more appropriate uses. Building 77A, the “Composites Lab and Assembly Facility,” is an over 12,000 gsf engineering shop dedicated to constructing and fabricating specialized parts and materials for scientific research. Building 77A is surrounded by Building 77 (Engineering Shop Building) to the north and screening tree zones to the west, south, and east (see Figure 2). Chemical storage cabinets are maintained on a paved surface immediately southwest of Building 77A.

The Building 77A addition would house one existing and one new, extra-long autoclave (for plastics fabrication) as well as an existing reaction furnace / vacuum vessel (for high temperature, controlled atmosphere processes); these apparatus support such endeavors as the Linac Coherent Light Source (LCLS) project at Stanford Linear Accelerator (SLAC) and the ATLAS detector at the Large Hadron Collider (LHC) at CERN. By housing this equipment in the proposed building addition, valuable high-bay space would be preserved or made available in Building 77A for activities that require use of the overhead crane.

The prefabricated steel-framed, metal-sided addition would be seated atop a drilled-pier foundation and structural slab floor. Compressed air, water, drainage, and fire sprinklerization would be carried over from Building 77 and/or 77A main systems. To provide for electric power needs for new buildings systems and equipment, the project would extend electrical conduit (800 amp capacity) from a 2500 KVA substation adjacent to Building 77 directly to Building 77A. Construction of the Building 77A addition is expected to take place between (approximately) March 2019 and March 2020 and is expected to involve no more than one dozen workers on site at any one time. Approximately 80 trucks bringing building components would be spaced out over several months and in compliance with Berkeley Lab’s construction truck management policies to avoid traffic impacts. Existing chemical storage cabinets to the southwest would likely be repositioned within the contiguous developed area to maintain convenient access.

All construction and operational work would be conducted by properly trained staff and contractors who would be provided with appropriate personal protective equipment and follow all applicable federal, state, and Berkeley Lab safety rules, protocols, and procedures. The Building 77A addition would meet all applicable building and seismic codes. The Building 77A addition would not be visible from off-site viewpoints. Operational energy and utility use, air emissions, and employee-related trip generation would be within the current envelop of existing operations.

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Categorical Exclusion(s) Applied:

B1.15 – Support buildings

B1.31 – Installation or relocation of machinery and equipment

B2.5 – Facility safety and environmental improvements

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:  Date Determined: 4-3-18  
Jeff Philliber

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

BSO Project Manager:  Date Determined: 4/4/18  
Rick Chapman

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.

BSO NEPA Program Manager:  Date Determined: 4/4/18  
Susan Fields

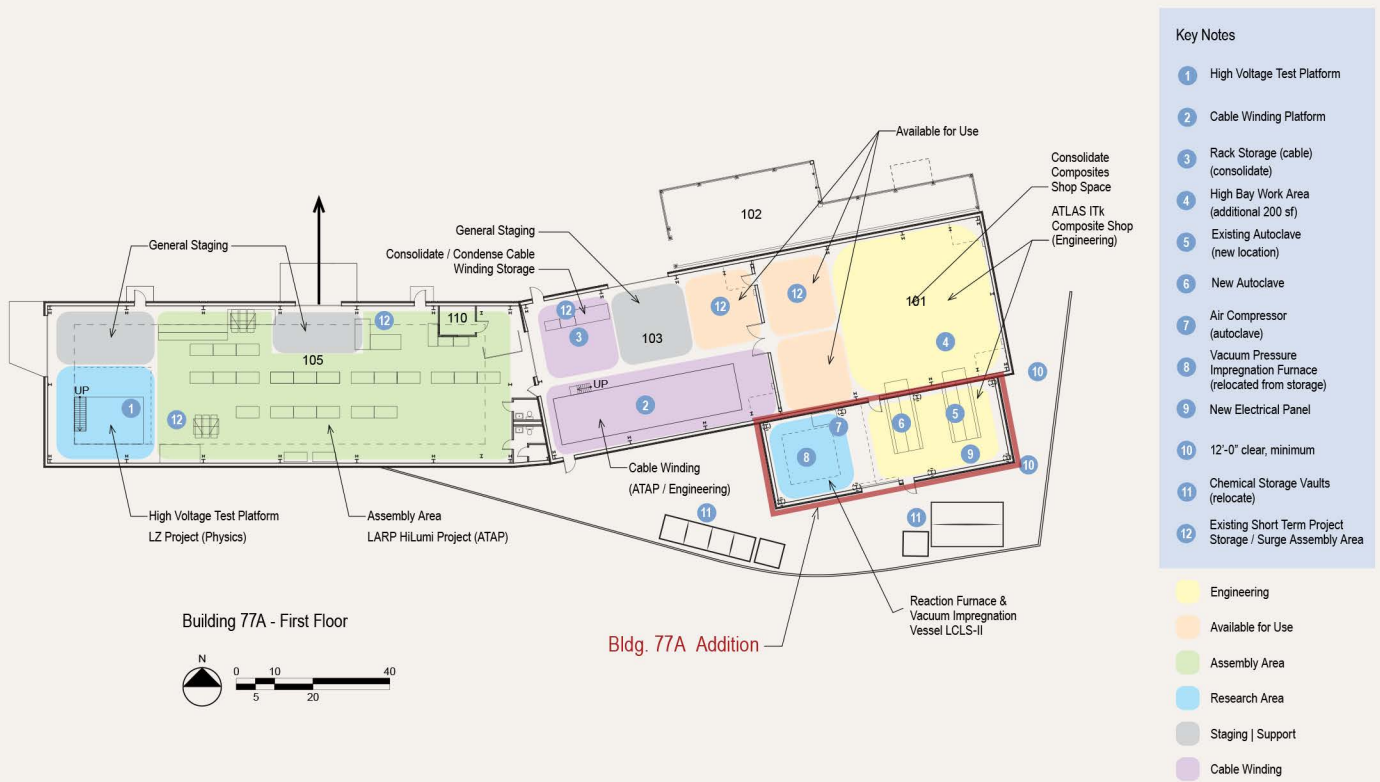
Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1 B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically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

NEPA Compliance Officer:

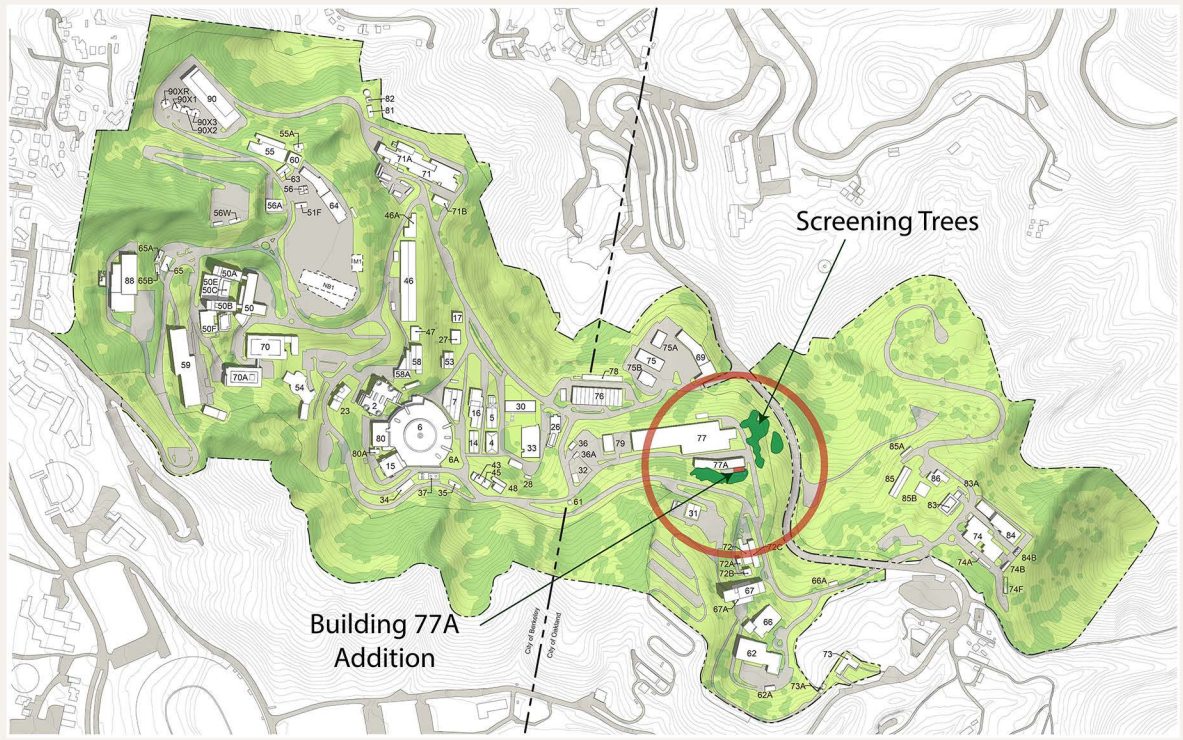


Date Determined:

4/10/18



**Figure 1**



**Figure 2**