

I EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE) is proposing the Seismic Phase 2B Project (Proposed Action) at the DOE Lawrence Berkeley National Laboratory (LBNL). LBNL is located on a 200-acre site in the hills above the UC Berkeley campus in Berkeley and Oakland, California. LBNL is a member of the national laboratory system supported by DOE and is managed by the University of California through a DOE Management and Operating (M&O) contract. The site includes research and support buildings and structures that conduct federally funded research and development.

The purpose and need of the Proposed Action and its alternatives is to remedy or remove space at LBNL which poses life safety risks and to provide seismically safe and modern research space at LBNL. The Proposed Action is subject to environmental review under the National Environmental Policy Act (NEPA) and is the subject of this Environmental Assessment (EA). This EA provides information and analysis that the DOE may use in its determination as to whether to pursue the Proposed Action or any of the alternative actions.

The Proposed Action¹ would remove approximately 43,000 gross square feet (gsf) of office and laboratory space through the demolition of two buildings (25/25B and 55) deemed seismically deficient under the UC Seismic Rating system² and six antiquated trailers (71C, D, F, J, K, and P) that cannot be cost-effectively upgraded. Approximately 43,000 gsf of new space would be provided in a new general-purpose laboratory and office building (GPL) which

¹ The Proposed Action identified and analyzed in this EA is a refinement of the project description presented earlier in the University of California's Seismic Phase 2B Draft Environmental Impact Report (EIR) and circulated for public review between January 29 and March 15, 2010. In the earlier project description, approximately 100 UC LBNL staff were to relocate to the proposed GPL building at the LBNL site from off-site locations such as the 717 Potter Street facility in Berkeley and the Donner Laboratory on the UC Berkeley Campus. Under this refined project description, those 100 LBNL staff would remain in place at off-site facilities.

² University Policy on Seismic Safety, <http://www.ucop.edu/ucophome/coordrev/policy/1-17-95att.html>, accessed on April 2, 2010.

meets all federal requirements regarding energy conservation and sustainability. Under the Proposed Action, this building would be built at the Building 25/25B demolition site. The Proposed Action would also seismically upgrade Building 85/85A, the site-wide Hazardous Waste Handling Facility (HWHF) which is deemed seismically deficient under the University of California Seismic Rating system. The locations of these project components are shown on Figure III-1.

Five alternatives to the Proposed Action, labeled Alternatives A through D, and the No-Action Alternative, are also considered in this EA.

- ◆ **Alternative A** differs from the Proposed Action in the location proposed for the GPL. Under this alternative, demolition of the two seismically deficient buildings and six trailers would occur, as would seismic strengthening of Building 85/85A. However, the GPL would be built on the site of the existing Building 74 southeast (SE) parking lot. This site would co-locate related research programs and personnel in the Strawberry Cluster on the site, but would be in very close proximity to the UC Botanical Garden.
- ◆ **Alternative B** also differs from the Proposed Action in the location proposed for the GPL. Under this alternative, demolition of the two seismically deficient buildings and six trailers would occur, as would seismic strengthening of Building 85/85A. However, the GPL would be built off-site at the UC Berkeley Richmond Field Station (RFS), located 6 miles to the northwest of the LBNL site. Selection of this site would not allow for near-term co-location of research programs and personnel with similar interests and specialized equipment needs. There would likely be more vehicle miles traveled (VMT) by UC LBNL personnel as a result of construction of the GPL at this location.
- ◆ **Alternative C** includes demolition of the two seismically deficient buildings and six trailers and seismic strengthening of Building 85/85A, but no new GPL construction. Instead of new building construction, Alternative C would use space in one or more existing buildings in the City of Berkeley or Emeryville. The off-site building is farther from the Hay-

ward Fault than the LBNL site under the Proposed Action. This alternative would not have the negative environmental impacts of the new building construction activities, but also would likely not have the positive impacts associated with providing the replacement space in an energy-efficient GPL. Additionally, as there would be no new GPL, safe, modern, high-accuracy research facilities suitable for co-located and coordinated research would not be built and this would challenge the ability of UC LBNL scientists to continue to successfully address the critical issues posed by the current and emerging DOE missions.

- ◆ **Alternative D** would not involve the demolition of seismically deficient structures or the construction of a new GPL. However, seismic strengthening of Building 85/85A would still occur. As per UC policies on seismic safety, personnel have already been moved from Building 25/25B that was deemed seismically deficient and the building has remained vacant. Although Building 55 and Building 71 trailers could remain occupied over the near term, UC LBNL would likely relocate personnel from these buildings in the long term. Limited capital costs would be required for this alternative as UC LBNL would continue to pay energy and maintenance costs for the older facilities, including costs for necessary upgrades. However as there would be no new GPL, safe, modern, high-accuracy research facilities suitable for co-located and coordinated research would not be built and this would challenge the ability of UC LBNL scientists to continue to successfully address the critical issues posed by the current and emerging DOE missions. Additionally, the benefits associated with the construction of a more energy efficient GPL building would not accrue.
- ◆ The **No-Action Alternative** is used for comparison with the other alternatives and serves as the baseline for the cumulative impact analysis. Under this alternative, the DOE would not fund any component of the Proposed Action and DOE programs and personnel would not be located in a new GPL facility. While the No-Action Alternative would not result in any new impacts at the project level, the environmental benefits of

the Proposed Action, including increased seismic safety and development of modern, energy-efficient laboratory space, would not be realized.

In this EA, the Proposed Action and each of the alternatives are analyzed for environmental effects specific to the action alone, and also for cumulative effects of the Proposed Action or alternative in combination with other known past, present and reasonably foreseeable actions. Table I-1 summarizes actions and impacts associated with the Proposed Action and alternatives.

The EA reflects that there would only be minor environmental effects from the Proposed Action by itself, or cumulatively when taken in conjunction with the other projects planned for the time frame of mid-2010 to late 2018.

Alternative A, with GPL construction at the Building 74 SE Parking Lot site, would result in project level impacts to biological resources and both construction and operational noise.

Alternative B, with GPL construction at the RFS, Alternative C, with use of an existing building in Berkeley or Emeryville, and Alternative D, which would involve only the seismic strengthening of Building 85/85A, would have only minor impacts at the project level. The No-Action Alternative would not introduce any new impacts; however there would be no beneficial effects related to geology and seismicity, or hazardous materials and human health.

TABLE I-1 SUMMARY OF ACTIONS AND IMPACTS

Action Description	Proposed Action	Alternative A	Alternative B	Alternative C	Alternative D	No-Action
Site Location	LBNL: GPL at Building 25/25B, B55, 71 trailers + B85/85A seismic strengthening	LBNL: GPL at Building 74 SE Lot. Demolition of 25/25B, 55, B71 trailers + B85/85A seismic strengthening	GPL at RFS. LBNL: Demolition of B25/25B, B55, B71 trailers + B85/85A seismic strengthening ^a	No GPL, Leased space off-site. LBNL: Demolition of 25/25B, 55, 71 trailers + B85/85A seismic strengthening	LBNL. No GPL, continued use of B55 and 71 trailers in short-term, no B85/85A seismic strengthening	No GPL, continued use of B55 and 71 trailers in short-term, no B85/85A seismic strengthening
Impact Areas^b						
Geology & Seismicity	Minor impacts	Minor impacts	Minor impacts	Minor impacts	Minor impacts	No new impacts, but no beneficial impact from seismic upgrade
Hazardous Substances and Human Health	Minor impacts	Minor impacts	Minor impacts	Minor impacts	Minor impacts	No new impacts, but no beneficial impact from seismic upgrade
Water Resources	Minor impacts	Minor impacts	Minor impacts	Minor impacts	Minor impacts	No impacts
Biological Resources	Minor impacts	Minor impacts including loss of 20,000 sf of Alameda Whipsnake habitat and up to 46 Coast live oak trees	Minor impacts	Minor impacts	Minor impacts	No impacts
Aesthetics	Minor impacts	Moderate impacts as GPL would be highly visible from UC Botanical Garden	Minor impacts	Minor impacts	No impacts	No impacts
Transportation and Traffic	Minor construction related impacts	Minor construction related impacts	Minor construction and operational impacts	Minor impacts	Minor impacts	No impacts
Noise	Minor impacts	Moderate impacts as City of Oakland Noise Ordinance standards could be exceeded during construction, although these impacts would be temporary.	Minor impacts	Minor impacts	Minor impacts	No impacts

TABLE I-1 SUMMARY OF ACTIONS AND IMPACTS (CONTINUED)

Action Description	Proposed Action	Alternative A	Alternative B	Alternative C	Alternative D	No-Action
Air Quality	Minor impacts. General conformity de minimus levels and BAAQMD thresholds would not be exceeded.	Minor impacts. General conformity de minimus levels and BAAQMD thresholds would not be exceeded. But sensitive receptors in the UC Botanical Gardens would be in closer proximity.	Minor impacts. General conformity de minimus levels and BAAQMD thresholds would not be exceeded. But selection of this site for the GPL would initially result in more VMT and associated emissions.	Minor impacts. General conformity de minimus levels and BAAQMD thresholds would not be exceeded.	Minor impacts. General conformity de minimus levels and BAAQMD thresholds would not be exceeded.	No impacts
Greenhouse Gases	Minor impacts, emissions below CEQ GHG threshold.	Minor impacts emissions below CEQ GHG threshold.	Minor impacts, emissions below CEQ GHG threshold. But selection of this site for the GPL would initially result in more VMT	Minor impacts emissions below CEQ GHG threshold.	Minor impacts, emissions below CEQ GHG threshold.	No impacts
Utilities	Minor impacts	Minor impacts	Minor impacts	Minor impacts. Existing building would require no new infrastructure or connections	Minor impacts	No impacts
Wildland Fires	Minor impacts	Minor impacts but risk slightly greater than Proposed Action due to vegetation surrounding Building 74 SE Parking Lot site	Minor impacts	Minor impacts	Minor impacts	No impacts
Traffic Accidents	Minor impacts	Minor impacts	Minor impacts	Minor impacts	Minor impacts	No impacts

^a Standard Project Features are not required at the RFS, but would be implemented voluntarily.

^b The Proposed Action and alternatives incorporate standard project features that apply to all projects at LBNL. These features are identified in Appendix A which is incorporated into this EA by reference.