



November 2005

Proposed Building 51 and Bevatron Demolition Project



Building 51



Cut-away view of the Bevatron as it was originally configured

What is the Bevatron?

The Bevatron was a large scientific apparatus, a synchrotron accelerator, which began operation at Lawrence Berkeley National Laboratory (Berkeley Lab) in 1954. It was last operated in 1993, and is now abandoned in place within Building 51. The Bevatron is approximately 180 feet in diameter. The accelerator made major contributions in four research areas: high-energy particle physics, nuclear heavy-ion physics, medical research and therapy, and space-related studies of radiation damage and heavy particles in space. Early discoveries at the Bevatron were associated with four Nobel prizes.

How big and where is Building 51?

Building 51 is an approximately 126,500-gross-square-foot, steel-frame structure built in the early 1950s. The building is located in the west-central part of Berkeley Lab and occupies approximately 2.25 acres.

Why is the Lab proposing to demolish Building 51 and the Bevatron?

The objective of the project is to remove a substandard building and its contents. Neither the Bevatron nor Building 51 are needed by the Lab. Building 51 is seismically inadequate, old and deteriorating, and consumes disproportionate maintenance resources. In addition, removal of the building and its contents would free up the site for future development, although no specific plan or project has been identified.

What, specifically, is proposed to be demolished?

Site utilities would be disconnected, blocks that shielded the accelerator would be removed from around the Bevatron apparatus, and the Bevatron itself – including steel yokes, magnets, and beamline pipes – would be disassembled and removed from the site. The Building 51 structure and components would also be demolished and removed. These include roof, walls, superstructure, slabs and foundations.

What is the cost of this proposed project and how long would it take?

The estimated cost for complete demolition is presently estimated to be between \$67 and \$83 million, and is specifically identified for funding by the U.S. Department of Energy. Depending on the annual funding amounts, the demolition is estimated to take four to seven years of field work, after completion of planning and engineering efforts.

Is the facility a historic building or place?

Because of the significant scientific contributions that were made there, the Building 51/Bevatron site is eligible for listing in the National Register of Historic Places. A Historic American Engineering Record (HAER) report for the facility has been accepted by the National Park Service (NPS), and a Historic American Building Survey (HABS) report is being reviewed by NPS.



November 2005

What kinds of hazardous materials would be removed by the demolition?

Many of the materials to be removed would consist of non-hazardous construction debris that would be reused or recycled if feasible. The proposed demolition also would result in the removal of hazardous waste, low-level radioactive waste, and mixed waste. Portions of the Bevatron apparatus, its concrete shielding, and other items have low levels of radioactivity above naturally occurring levels due to their exposure during the Bevatron's operation. Also, some non-radioactive hazardous materials, such as those common in older buildings, would be encountered, e.g. asbestos, mercury, lead, machine oils, and/or PCBs.

How would items from Building 51 and the Bevatron be transported off-site?

Materials generated as a result of the demolition project would be trucked from Berkeley Lab in accordance with U.S. Department of Transportation requirements. In general, shipments from the site would proceed down Cyclotron Road to Hearst Avenue and then proceed west on Hearst Avenue, south on Oxford Street, and west on University Avenue to I-80. Shipments to the site would reverse these directions. An estimated maximum of about 4,700 one-way truck trips would be required over the four-to seven-year term of the project.



How would this project be of benefit to the community?

This project would remove a deteriorating, seismically inadequate building and its contents. Contaminated soil and groundwater would be addressed according to regulatory-agency-approved procedures. At the project site, the construction debris and waste would be screened and characterized based on location and the associated degree of potential hazard. Trucks would remove debris and various types of waste from the Laboratory site to suitable facilities in conformance with applicable environmental regulations, as well as other appropriate practices for public safety and traffic management.

How can I follow this environmental review process?

Under the California Environmental Quality Act (CEQA), a Notice of Preparation (NOP) for an Environmental Impact Report (EIR) on the proposed project was issued on March 15, 2005. A Draft EIR was issued on October 21, 2005, and is available for review at the Berkeley Public Library, 2090 Kittredge Street, Berkeley, second floor reference area, and also via the web site: <http://www.lbl.gov/Community/env-rev-docs.html> An Environmental Assessment (EA) for the project under the National Environmental Policy Act (NEPA) is also being prepared.

What is the schedule for review of the Draft EIR and EA?

The Draft EIR has a public review and comment period extending from October 21 - December 7, 2005, with a public meeting to be held on November 16, 2005. The Draft EA is expected to be issued by the Department of Energy later in the year, with a 30-day review and comment period. For further information on this proposed project, please contact:

Daniel J. Kevin,
Environmental Planning Group
Lawrence Berkeley National Lab
One Cyclotron Road, MS 69R0201
Berkeley, CA 94720
Email: DJKevin@lbl.gov

Public hearing on the Draft EIR:

November 16, 2005
North Berkeley Senior Center - 6:30 - 8:30pm
1901 Hearst Street, Berkeley, CA