FINDING OF NO SIGNIFICANT IMPACT
PROPOSED DEMOLITION OF BUILDING 51 AND THE BEVATRON
AT LAWRENCE BERKELEY NATIONAL LABORATORY,
BERKELEY, CALIFORNIA

AGENCY: U.S. Department of Energy (DOE)

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: DOE has completed an Environmental Assessment (EA) [DOE/EA-1541] that evaluates the impacts of demolition of the Bevatron and the structure that houses it, Building 51, at Lawrence Berkeley National Laboratory (LBNL). The primary project objectives are to eliminate potential hazards associated with Building 51; to reduce the burden on LBNL maintenance resources; to free space for potential future activities; and to help satisfy the DOE policy requiring that the square footage of new construction at a DOE facility be balanced by elimination of an equivalent amount of excess space.

The draft EA was issued for public comment on March 21, 2006, revised as appropriate based on public comments, and issued as final in March 2008. Based on the analyses reported in the EA, DOE has determined that the proposed action is not a major Federal action that would significantly affect the quality of the human environment within the meaning of the National Environmental Policy Act (NEPA) of 1969. Therefore, the preparation of an Environmental Impact Statement (EIS) is not necessary, and DOE is issuing this Finding of No Significant Impact.

PUBLIC AVAILABILITY OF EA AND FONSI: The EA and FONSI may be reviewed and copies of the document obtained from:

U.S. Department of Energy
Berkeley Site Office
Lawrence Berkeley National Laboratory
1 Cyclotron Road, MS 90-1023
Berkeley, CA 94720
Phone: 510-486-4353

The EA and FONSI may also be reviewed at the city of Berkeley Public Library
Library Director
Berkeley Public Library
Central Branch
2090 Kittredge
Berkeley, CA 94704

The document can also be viewed on the following website:
www.lbl.gov

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FURTHER INFORMATION ON THE NEPA PROCESS: For further information on the NEPA process, contact:

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P.O. Box 2001, SE-32
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DESCRIPTION OF THE PROPOSED ACTION: Under the proposed action, the Bevatron apparatus would be disassembled, Building 51 and the foundation underneath the building would be demolished, and the resulting debris and other materials would be removed. The site would then be backfilled, and the fill would be compacted and leveled. This would make future reuse of the site more feasible, although further preparatory site work outside of the scope of this project would be necessary. The project would also help satisfy the DOE policy requiring that the square footage of new construction at a DOE facility be balanced by elimination of an equivalent amount of excess space.

The Bevatron is a particle accelerator that is neither operational nor functional. Building 51 is deteriorating and maintenance costs have escalated. In addition, Building 51 does not meet current building codes, the roof leaks in several locations, and portions of the structure do not comply with current seismic design standards.

The EA for the proposed action was issued for public comment on March 21, 2006, revised as appropriate based on public comments, and issued as final in March 2008.

ALTERNATIVES CONSIDERED: In addition to the proposed action, impacts were also evaluated for the No Action Alternative, a Preservation Alternative, and an On-Site Rubbling Alternative. If no action were taken, the Bevatron would not be dismantled and Building 51 would not be demolished. Radioactive materials, as well as other hazardous materials such as lead dust, oils, and asbestos, would continue to remain in place. The Preservation Alternative would dedicate the entire site to non-LBNL uses and could be managed by another public agency, such as the National Park Service (NPS), with the intention of actively preserving Building 51 and the Bevatron equipment within it. The public agency would maintain and preserve the building in accordance with the *Secretary of the Interior's Standards for Preservation* and would allow limited public access for interpretive/educational purposes. Under the On-Site Rubbling Alternative, project activities would remain the same with the exception of activities related to processing and transporting concrete debris. Most of the concrete from the building structure (i.e., walls and floors), foundation, and many of the concrete blocks shielding the Bevatron would be rubbled on-site. Only concrete containing no detectable added (i.e., non-naturally occurring) radioactivity and otherwise clear of contaminants would be rubbled.

ENVIRONMENTAL IMPACTS: The EA assessed direct and indirect impacts of the proposed action and alternatives on the following resources: Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Human Health, Hydrology and Water Quality, Noise, Public Services, Public Utilities, Traffic and Circulation, and Visual Quality. Cumulative impacts were also assessed.

Potential air quality impacts would be negligible and consist primarily of sporadic, temporary, and localized effects on the local air quality of the site and its surroundings, resulting from construction-related fugitive dust, and emissions from haul trucks, heavy construction equipment and demolition machinery, as well as worker automobile trips. Operational emissions of criteria pollutants would be below threshold levels defining "major sources" and would not exceed National Ambient Air Quality Standards.

The proposed action would result in minor impacts to biological resources on the project site. Mitigation measures would be adopted to address potential indirect adverse effects on nesting special-status birds and roosting special-status birds. Special-status plant species would not be affected because of the low potential for special-status plant species to occur on the Building 51 site. The cumulative impacts of all development in the area anticipated during the project would not result in a substantial reduction in open space or wildlife habitat. Similarly, the proposed action would not make a considerable contribution to the overall cumulative biological impact.

Under the proposed action, changes would occur to cultural resources. DOE has determined that no archaeological resources would be affected by the proposed action. Building 51 and the Bevatron were determined eligible for listing in the National Register of Historic Places (NRHP) and have been listed in the California Register of Historical Resources. However, LBNL has adequately mitigated for the potential loss of Building 51/ Bevatron with: the completion of a Memorandum of Agreement (MOA), dated November 13, 1997, which was accepted by the Advisory Council on Historic Preservation (ACHP); the completion of the National Park Service's Historic American Engineering Record (HAER) documentation; and the approval of the Historic American Building Survey (HABS) addendum by NPS. There are no cumulatively significant impacts on historic resources because of the mitigation provided by the completed HABS/HAER documentation. As an additional measure, LBNL plans to commemorate the scientific achievements attributed to the Bevatron with a monument and/or display listing the historic discoveries that occurred there.

Impacts to geology and soil would be minor under the proposed action. Demolition would be of a facility that is currently located on a stable geologic unit. The proposed action would not cause a condition that would destabilize the underlying geology because the facility would be removed and the facility footprint converted to vacant area. Although portions of LBNL property may be within a Seismic Hazard Zone, this zoning does not apply to the proposed action because the building site itself is not zoned, and the proposed action involves demolition, with no new facility construction.

Potential impacts of hazardous materials, hazardous waste, and other hazards would be negligible. The hazard to persons living along the truck routes, as well as LBNL employees, contractors and the general public, would be below regulatory limits and any standards of significance. Any radioactively-contaminated materials would be characterized according to DOE-approved protocols and disposed appropriately. Because of the low levels of radioactivity present in the concrete being demolished and the protective measures being taken, it is expected that no DOE added detectable radioactivity would be contained in the dust generated by the proposed action.

The proposed action would include off-site disposal of items containing low levels of radiological activity. Such transport and disposal activities would be subject to appropriate safety measures in

accordance with LBNL operational procedures (e.g., as set in LBNL PUB-3000; LBNL, 2005c). Consequently, any exposures to LBNL employees and contractors (e.g., truck drivers) and to the general public (e.g., pedestrians, motorists, etc.) from such activities would be below applicable regulatory limits.

Implementing the proposed action would not result in any adverse impacts to hydrology or water quality. The project area, being greater than one acre, will require coverage under the statewide General Construction Permit and various protective mechanisms. Developing and implementing a project-specific Stormwater Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants, including dirt and silt from erosion and sedimentation, from contacting stormwater and entering receiving waters will be put in place. As required by the statewide General Construction Permit, the preparation and implementation of SWPPPs will ensure that pollutants would not enter the environment through uncontrolled runoff. Ongoing groundwater monitoring would not be disturbed. Because the proposed action would cause stormwater runoff on the subject site either to be slightly reduced or to remain the same as under existing conditions, the impact on runoff rates and volumes discharged would be negligible.

Noise impacts are expected to be minimal. On-site receptors, such as occupants of LBNL buildings adjacent to the Building 51 site, would experience temporary noise increases during demolition. Although such receptors are not generally considered noise sensitive, implementation of mitigation measures identified in the 1987 Long Range Development Plan (LRDP) Environmental Impact Report (EIR), as amended,[1] would lessen noise impact to a negligible level. In addition, LBNL would require its subcontractors to employ specific noise control procedures. Given the limited number of truck trips and the volume of existing traffic on the affected roadways, the general increases in noise levels along haul routes would not be perceptible.

There would be no impact to public services under the proposed action. The project would not introduce any additional long-term population or employment into the area, and thus, would not result in any additional long-term demand for police or fire services or the need for new or altered facilities. The demolition activities may require temporary roadway lane closures and detours, but these temporary changes would not substantially affect response times to the Building 51 site and its vicinity. Fire, emergency medical, and police services would be appropriately informed of relevant aspects of the project. No damage to roadways is expected beyond that which would be considered normal wear and tear. In addition, the proposed action would result in a negligible impact on public utilities. Project demolition activities would generate waste and debris; however, no problems are anticipated in disposing of the various types of waste that would be generated.

The proposed action would result in a negligible impact on traffic, circulation, and parking at the Building 51 site and in the vicinity. Mitigation would be adopted to address potential temporary and intermittent adverse effects to transportation and traffic. The project would neither change the physical characteristics of the street network serving the site, nor generate traffic that is incompatible with existing traffic patterns. It would be unlikely that the rate of motor vehicle accidents (i.e., accidents per number of vehicles) would increase due to the project and there would be no reasonably foreseeable substantial risks

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[1] The Environmental Assessment includes references to the 1987 LRDP EIR, as amended, although the analysis is also consistent with the 2006 LRDP EIR.

to health and safety from transporting project demolition material. No additional cumulative transportation impacts would result from the proposed action.

There would be no adverse impact on the visual quality of the site, or areas in the vicinity of the site as a result of the proposed action. Demolition activities would create a temporary impact to visual quality and views of the site; however, after completion of demolition, the site would be backfilled, compacted, and hydroseeded. No long-range views of the project site would be altered, as the site is generally not visible from longer distances within the city of Berkeley. While removing the Bevatron and Building 51 would alter the character of the site, the alteration would not be an adverse aesthetic impact.

Since publication of the Draft of this Environmental Assessment, an alternative-sequence variant, under which project activities would be conducted in an alternative sequence, has been developed. The sequence of demolition activities analyzed in the Draft EA assumed that the existing cranes present in the building would be used for the removal of the shielding blocks. Subsequent analysis and consideration developed a project variant that uses an alternative sequence for the project demolition activities, which would begin with appropriate sampling and surveys for hazardous building construction materials and debris followed by removal and abatement of all hazardous materials within Building 51. Prior to demolition of the building structures, systems, and components, the project would set up additional stormwater drainage and collection systems. Once the building is demolished down to the grade level concrete slab, the Bevatron shielding blocks and equipment would be dismantled and removed with the use of two modern mobile cranes. Finally, the project would demolish and remove the building foundations, tunnels, trenches, and slabs and backfill with suitable clean fill material.

In addition, an alternative-schedule project variant was developed to reduce the minimum duration of the project activities from four years to three and one-half years.

Both of these variants were fully analyzed in a Technical Memorandum that was published as part of the Bevatron and Building 51 Final Environmental Impact Report. The Bevatron Final EIR was certified on July 19, 2007. If implemented, neither demolition sequence variant would create a new adverse impact, nor would they substantially increase the severity of any impact associated with the project or require new or altered mitigation measures.

DETERMINATION: Based on the analyses of the EA, and after careful consideration of all public and agency comments, DOE has determined that demolition of Building 51 and the Bevatron at LBNL does not constitute a major Federal action that would significantly affect the quality of the human environment within the context of NEPA. Therefore, preparation of an EIS is not required.

Issued at Berkeley, California, this 3rd day of April 2008.

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