APPENDIX G

Bevatron Final EIR Technical Memorandum, July 5, 2007

TECHNICAL MEMORANDUM

1. Purpose of the Memorandum

On October 21, 2005, the University of California released for public review a Draft Environmental Impact Report (DEIR) for the Demolition of Building 51 and the Bevatron at the Lawrence Berkeley National Laboratory (LBNL) in Berkeley, California. The DEIR evaluated the environmental impacts of the demolition of this inactive research facility. As analyzed in the DEIR, the specific sequence of events for the demolition was as follows:

> Under the proposed project, the concrete shielding blocks that surround the Bevatron would be removed, the Bevatron apparatus would be disassembled, Building 51 and the shallow foundation underneath the building demolished, and the resulting debris and other materials removed. The site would then be backfilled, and the fill compacted and leveled. (DEIR p. II-1)

The sequence of demolition activities 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 as follows:

> The project 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.

The primary purposes of this technical memorandum are to assess these potential changes to the schedule or sequence of activities as originally proposed and to determine whether the alternative-sequence project variant or the alternative-schedule project variant, operating individually or together, would: 1) introduce new impacts, 2) change the level of significance of identified impacts, or 3) require additional mitigation measures to control identified impacts, old or new.

2. Background

The project site is part of the LBNL campus, located in the cities of Berkeley and Oakland in Alameda County, on property owned by the University of California. The proposed project would ultimately convert approximately 2.25 acres (the "demolition zone") from a developed area (i.e., occupied by Building 51) to an undeveloped area for an indeterminate time, until another use is proposed, approved, and initiated. The remaining part of the four-acre site would be used for parking and staging.

Building 51 is a large (approximately 126,500-gross-square-feet) steel-frame shed-like structure that was built to shelter the Bevatron apparatus and its associated mechanical, electrical, shop, and office functions. The facility began construction in 1949 and was occupied by 1950. The approximately 180-foot-diameter Bevatron was constructed in 1954 and used as a proton synchrotron—a particle accelerator that studied high-energy nuclear processes. Later modifications of the Bevatron enabled researchers to accelerate heavy ions and expand the facility's usefulness in additional areas, including medical research, cancer treatment, and cosmic ray experiments. The facility operated from 1954 until 1993. Since the end of the Bevatron's operations in 1993, Building 51 has had limited use for equipment storage, office space, and dry laboratories (e.g., for computer repair).

Hazardous materials that were used or generated at the project site include asbestos-containing materials (ACMs) as part of construction, polychlorinated biphenyls (PCBs) and mercury used in electrical and research equipment, lead shielding, lead-based paint, residual lead dust, radioactive waste, beryllium from the Bevatron components, as well as other hazardous materials.

The project site is entirely paved or developed except for two small areas of ornamental landscaping at the entrance to Building 51. Except for two small ornamental trees there, no trees would require removal to allow for demolition of any of the proposed facility components.

Small areas of the site are underlain by the edges of two groundwater plumes containing volatile organic compounds (VOCs). Soils underneath portions of the site were contaminated by VOCs, petroleum hydrocarbons, polychlorinated biphenyls (PCBs), and/or mercury that were released at unknown times during the period when the Bevatron was in operation. Starting in the early 1990s, investigation and cleanup actions have been undertaken. These actions are under the oversight of the California Department of Toxic Substances Control, which consults with such other agencies as the San Francisco Bay Regional Water Quality Control Board, DOE, and the City of Berkeley Toxics Management Division. As a result of the completion of interim corrective measures at two soil units at Building 51 under the Laboratory's Environmental Restoration Program, soil contaminants have been reduced to levels considered "protective of human health and the environment" under U.S. Environmental Protection Agency risk assessment guidelines. Groundwater contamination continues to be remediated under the Environmental Restoration Program.

3. Project Variants

A. Alternative-Sequence Variant

The alternative-sequence variant for the project would revise the sequence of demolition activities without changing the overall objective of the project – namely, to demolish the entire building and Bevatron. The following is an outline of the main categories of project activities, in the order in which they would be accomplished under the alternative sequence:

- Utilities and Cold and Dark. The preliminary measures of locating and rerouting electrical and mechanical utilities as necessary would remain as initial actions to secure the site.

- Hazardous Materials and Waste Abatement. Next would come hazardous materials and waste abatement, which would include sampling and surveys to identify hazardous materials contained within the building and in building construction materials, including asbestos, lead-based paint, PCBs, Mercury, Beryllium, and lead dust, as well as removal of all hazardous materials that can be removed by hand methods. Materials such as the heavy depleted uranium blocks, lead paint, lead dust fixed by painting and solvent spills to be disposed of as part of the floor slabs would be protected from demolition activities until the time when they can be removed individually or disposed of as part of the demolition debris.

- Removal and Abatement of Hazardous Building Materials. The asbestos-containing siding materials (transite) would be removed by extracting the fasteners and then removing the siding panels.

- Construction of Retaining Wall. Prior to remaining demolition activities, construct an approximately 170 foot long retaining inside Building 51 along the uphill side of the structure for slope stability. The foundation wall of the existing wall in this area currently provides slope stability but will be removed as part of the project. The new retaining wall would become a permanent feature of the project but would not protrude above ground

- Construct Site Drainage and Collection Systems. In anticipation of rain or potential stormwater runoff that could potentially come in contact with the exposed building interior features or Bevatron components, drainage controls would be installed at the site. The purpose of the site drainage control and collection systems would be to appropriately collect and retain stormwater for analysis to assure that runoff meets discharge requirements prior to discharge into sanitary sewer or storm drains.

- Non-Hazardous Non-Structural Materials. Remove and abate remaining non-hazardous, non-structural building materials.

- Removal of Structural Materials. Demolish remaining load-bearing structural elements of the building down to grade level with the use of excavators, mobile cranes, heavy equipment, and torch\mechanical cutting methods.

- Bevatron and Shielding Block Demolition. Remove the 750 to 800 concrete shielding blocks that surround the Bevatron. Removal of the shielding blocks is anticipated to be completed in less than 100 days. The Bevatron and associated appurtenances such as the steel yokes, magnets, and beamline pipes would then be disassembled using pneumatic impact tools, mechanical saws, and torches.

- Building Foundations and Backfill. Finally, the project would involve removal of the shallow foundations of the building, tunnels, trenches, and slabs. The resultant subsurface pit would be backfilled with imported clean fill and compacted to surface grade according to engineering specifications. Prior to backfilling, some areas where subsurface soil is suspected to be contaminated would be evaluated and potentially remediated by the Laboratory's Environmental Health and Safety Division under the oversight of the appropriate regulatory agency.

The remaining elements of the proposed project such as hydro-seeding the demolition zone with native grasses and leaving the groundwater monitoring wells in place would be identical to that as originally proposed in the DEIR.

B. Alternative Schedule Variant

The alternative-schedule variant for the project would revise the minimum duration of the project from four years to three and one-half years, with the maximum duration of the project remaining at seven years. This schedule variant could apply to the project and to the alternative-sequence variant.

4. Potential Environmental Impacts and Changes to Impacts

The following describes those impacts identified in the DEIR and then discusses potential for changes in impacts or in the significance of those environmental impacts for each of the 12 resource categories that were analyzed in the DEIR. Unless otherwise stated, the following analysis and discussions refer to effects of the Alternative-Sequence Project Variant, under either the project schedule or under the alternative schedule variant. Effects that are due exclusively to the Alternative Schedule are specifically noted as such.

4.1 Aesthetics

Potential impacts related to aesthetics for project activities in the sequence described in the DEIR were related to the changes in the visual quality of the site as well as the potential for an increase in light glare from nighttime activities. Both the revised sequence and the revised schedule would have no effect on the final visual quality of the site and would therefore remain a less than significant impact. The potential for nighttime work would also not change nor would the measures the Lab would take to minimize glare through the use of night shields on outdoor fixtures. Therefore, the potential impact would remain as less than significant.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Aesthetics	Equal impact	Less than Significant	None necessary

4.2 Air Quality

One potential impact related to air quality was identified in the DEIR. The demolition activities were determined to have a potential to generate short-term emissions of criteria pollutants, including particulate matter (dust), tailpipe emissions, asbestos fibers, and odor.

The primary difference between the sequence for the Project as described in the DEIR and the revised sequence would be that the revised sequence could subject the shielding blocks to potential surface damage during the demolition of the building (as the building roof collapses) and the subsequent exposure to the weather of the shielding blocks and Bevatron during the dismantling of the Bevatron. However, the revised sequence alternative proposes to protect the shielding blocks from damage during demolition of the Building 51 structure, thereby preventing any such surface damage.

There would be no appreciable change in the emissions of particulate matter (dust), tailpipe emissions, asbestos fibers and odor due to the change in sequence. The hazardous surficial materials on-site (such as lead dust), would be abated prior to demolition of the building. Removing these hazardous materials would also clean most horizontal surfaces of accumulated non-hazardous particulates. The demolition activity would be the same under either scenario, as would the Asbestos abatement process needed to remove, transport and dispose of the asbestos-containing materials within the structure.

The collapse of the building roof and supporting beams could be expected to cause minor surface damage primarily to the cap shielding blocks and possibly to the exteriors of the supporting blocks as well. The extent of such damage is not known, but the cap blocks are expected to easily withstand the impacts of the falling roof. The impact of the structure on the concrete could be expected to result in some surface spalling only if the surface protection were to fail, but even if that were the case, the resulting concrete chips should be sufficiently large to not become airborne dust and thus could be cleaned up and disposed of properly. Other particulates produced by the demolition, including those produced from the structure itself, as it collapses, would be the same for the sequence described in the DEIR as for the revised sequence.

The subsequent exposure to the weather of the shielding blocks and Bevatron would raise the possibility that any fine dust particles remaining on the surfaces of the blocks and the Bevatron could become airborne. The potential for airborne particulates would be localized to the vicinity of the site, but would continue throughout the process of removing all of the shielding blocks and dismantling the Bevatron. However, this potential would be fully mitigated by the cleaning and/or sealing of the surfaces of the shielding blocks and Bevatron, a part of the hazardous materials abatement that would occur before these items are shipped for disposal. The revised schedule variant would result in the same impact to air quality as analyzed in the DEIR and would therefore remain a less than significant impact.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Air Quality	Equal impact	Less than Significant	None necessary

4.3 Biological Resources

The DEIR identified four different potential impacts related to biological resources from the proposed project. The potential impacts were related to noise disturbances of nesting special-status birds, noise disturbances to special-status bats, harm or disturbances to common wildlife species, and the potential to disturb special-status plant species. The revised sequence would have no significant effect on the proposed timeline or the type and amount of noise generated from the site. Although mobile cranes would be brought in for the removal of the shielding blocks, the noise levels from the mobile cranes or haul trucks would be substantially less than from the hoe-ram, so this would not represent significantly more noise or disturbance than previously analyzed. For either variant, the potential to harm or disturb common wildlife or special-status species would remain equal to that of the project utilizing the sequence of activities analyzed in the DEIR. Therefore, the potential impact would remain less than significant with implementation of the mitigation measures identified in the DEIR.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Biological Resources	Equal impact	Less than Significant	None necessary

4.4 Cultural Resources

Because the revised sequence would result in the demolition of Building 51 and the Bevatron, the potential cultural resource impacts identified in the DEIR would be the same. The changes to the sequence or schedule would not affect the significant and unavoidable impact of the loss of an identified historical resource. Therefore, the potential impact would remain as significant and unavoidable.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Cultural Resources	Equal impact	Significant and Unavoidable	None necessary

4.5 Geology and Soils

The potential impact of the DEIR project related to geology and soils would result from the potential for soil erosion and loss of topsoil. The earthwork activities that could expose soils to erosion and loss of topsoil would remain as part of the project utilizing the revised sequence or schedule. The proposed excavation of the shallow foundations and any potentially contaminated soils also would remain. Therefore, the impact would be the same and would be less than significant.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Geology and Soils	Equal impact	Less than Significant	None necessary

4.6 Hazards and Hazardous Materials

The DEIR project would have three potential impacts related to hazards and hazardous materials. The first would be the potential for the workers, the public or environment to be exposed to hazardous substances as a result of the demolition. Of particular concern would be the potential exposure to lead dust, asbestos, hazardous materials within the equipment, and hazardous materials within the shielding blocks or concrete slabs. Revising the sequence of activities or schedule would have no effect on the abatement of these hazardous materials because, under either sequence, the work would still be carried out according to the appropriate regulations and using approved protocols. Abatement of surficial hazardous materials, such as lead dust and beryllium, would occur prior to the demolition of the building and therefore the result would be the same under either sequence. Asbestos abatement would be conducted under the LBNL Asbestos Management Program and handled by a licensed and certified asbestos abatement contractor. For the off-site disposal of materials containing low levels of radioactivity, the procedures set in LBNL PUB-3000 would assure that potential exposure to radioactivity would be far below applicable regulatory limits set by the U.S. Department of Energy and the U.S. Department of Transportation.

The second potential impact would be the potential for encountering contaminated soils during demolition of the subgrade foundations, tunnels, and slabs. This potential impact would also be unchanged by the revised sequence or schedule. These activities of the project would inevitably occur after the building and Bevatron were demolished and so the revised sequence would not affect it.

The final impact would be risk from wildland fires, which would be unchanged by the revised sequence or schedule. Therefore, there would be no change to the significance of the impact in the DEIR.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Hazards and Hazardous Materials	Equal impact	Less than Significant	None necessary

4.7 Hydrology and Water Quality

The removal of the building before the Bevatron could potentially expose the Bevatron, the shielding blocks, the concrete slab and the tunnels to rain and to stormwater runoff during a rainfall event. This revised sequence would require certain measures to ensure that water quality in the stormwater runoff from the site would not be affected. Without protection, the tunnels could be exposed to runoff, which might subsequently leach into the subsurface and affect groundwater quality. A drainage control plan with a collection system for retaining runoff during the remaining demolition activities would be required. The Stormwater Pollution Prevention Plan (SWPPP) would have to incorporate measures to control runoff and prevent all construction pollutants from the site from entering receiving waters. The DEIR discussed the LBNL requirement for a SWPPP and BMPs to control runoff that would be associated with demolition

contact water, which includes stormwater, water generated from dust suppression activities, and potential basement dewatering. This requirement would be the same as for the DEIR project after demolition of the building structure but during the demolition of the foundations and slabs; however, with the change in sequence, the control measures would have to be more extensive without the shelter of Building 51 for the duration of demolition of the shielding blocks and Bevatron. The water collection system would have to collect, store, and treat, if necessary, all water that falls or runs onto the demolition zone. However, as already discussed in the DEIR, discharge of collected water would still be accomplished in compliance with state and federal regulations. Clean wastewater could be discharged into the storm drain but contaminated wastewater would be treated to an acceptable level under a permit, and discharged into the sanitary system. Therefore, with implementation of site drainage control measures compliant with state and federal regulations and mitigation measures from the 1987 LRDP EIR, as amended, there would be no change to the significance of the impacts to hydrology and water quality. The revised schedule variant would result in the same impact to hydrology and water quality as analyzed in the DEIR and would therefore remain a less than significant impact.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Hydrology and Water Quality	Equal impact	Less than Significant	None necessary

4.8 Land Use and Planning

The revised sequence of demolition activities or schedule variant would have no effect on the significance of Land Use and Planning impacts identified in the DEIR. The project would still create temporary and intermittent impacts during the course of the demolition activities as identified in other sections of the DEIR. The project would also still result in a change of use for the site once the demolition is complete. Therefore, the significance would not change with the revised sequence or schedule.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Land Use and Planning	Equal impact	Less than Significant	None necessary

4.9 Noise

The DEIR identified the potential for demolition activities to generate intermittent and temporary noise levels above ambient levels. The analysis of noise generated during demolition combined the dismantling of the shielding blocks and Bevatron along with the demolition of the building as the first basic stage of demolition activity. This stage was determined to produce a noise level of 83 dBA at 50 feet. The loudest source of noise is estimated to be from the use of a hoe-ram impact hammer during demolition of the foundation and substructure, which would generate approximately 96 dBA at 50 feet. The revised sequence would still require the use of the hoe-ram

to complete the demolition of the foundation. As stated in the DEIR, all demolition work would be required to meet the maximum noise levels set by the Berkeley Noise Ordinance and the requirements of the 1987 LRDP EIR, as amended, mitigation measures. Therefore, the potential noise impacts would not change and would remain less than significant. The revised schedule variant would result in the same impact to noise as analyzed in the DEIR and would therefore remain a less than significant impact.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Noise	Equal impact	Less than Significant	None necessary

4.10 Public Services

The revised sequence or schedule would not change the basic demolition activities that would be required, and thus would have no effect on fire and police response times. As to the potential for truck trips to cause wear and tear on public roads, the revised sequence would neither increase nor decrease the number of truck trips or the amounts of materials transported. The same amount of material would be removed from the project site and would require the same type and number of truck trips analyzed in the DEIR. Therefore the potential impact would remain less than significant.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Public Services	Equal impact	Less than Significant	None necessary

4.11 Transportation/Traffic

The DEIR identified four impacts related to Transportation/Traffic, as follows:

- **Impact IV.K-1: The proposed project, including demolition and earthmoving activities such as excavation, backfill, and grading, would temporarily and intermittently increase traffic volumes on roadways used by demolition-related vehicles. (Less than Significant with Mitigation)**

- **Impact IV.K-2: Demolition workers would use the Building 51 staging area for parking. (Less than Significant)**

- **Impact IV.K-3: The project could potentially affect transit service in the project area. (Less than Significant)**

- **Impact IV.K-4: The project would generate truck trips carrying hazardous materials, potentially affecting safety. (Less than Significant)**

Of these, impacts IV.K-2 through IV.K-4 are less than significant without mitigation; only impact IV.K-1 would require the application of the following mitigation measure to be less than significant.

> **Mitigation Measure IV.K-1:** The frequency of truck trips (loaded or empty) shall be no greater than (a) one every 10 minutes (six truck trips per hour) during the a.m. and p.m. peak commute hours, and (b) one every five minutes (12 truck trips per hour) during periods other than the a.m. and p.m. peak commute hours.
>
> Under this limitation, the projected level of truck traffic would have minimal and less-than-significant effects on traffic flow, even if those trucks were to travel through the congested intersections on University Avenue at San Pablo Avenue and Sixth Street during the peak commute hours. Project-generated hourly truck trips would represent an increase of no more than about 0.9 percent above the a.m. and p.m. peak-hour traffic volumes, respectively, at the above-cited congested intersections.[1]

Significance after Mitigation: Less than Significant

Discussion

The DEIR provides the following information about traffic, especially the truck trips generated by the project:

- An estimated maximum of about 4,700 one-way truck trips would be required over the term of the project. Most would be one of two types: 1) inbound trips with empty trucks and outbound trips with trucks hauling away material for appropriate disposal, or 2) inbound trips delivering clean backfill and outbound empty trucks. Other trips would be for the delivery of project-related demolition equipment and miscellaneous supplies.

- Demolition work would be performed approximately 40 hours per week, Monday through Friday, with normal work hours between 7:00 a.m. and 3:30 p.m.

- The highest number of daily truck trips would occur when backfilling is underway. It is estimated that the number of daily truck trips at that time would be about 18 to 34 one-way trips (i.e., up to 17 loaded trucks and 17 empty trucks); during other periods of demolition, the number of truck trips per day would be no more than about 10 one-way trips.[2] Because truck trips would be spread over the course of a workday, the up to 34 daily one-way trips would generate an average of about four one-way trips per hour (i.e., one truck every 15 minutes). However, the actual number of shipments could be greater at particular times.

- The workforce for the project would generate auto commute trips. The number of workers and associated trips would vary over the multi-year demolition period, but is estimated to be about 20 to 25 workers on average per day, with a maximum of up to about 50 workers.

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1 The maximum 0.9-percent increase was calculated using six one-way truck trips (one every 10 minutes), a passenger-car-equivalence of three cars per one truck, and existing a.m. peak-hour traffic volumes on University Avenue. The percent increase with any other combination of values (e.g., four one-way truck trips, or existing p.m. peak-hour volumes, or total intersection volumes, or cumulative volumes) would be less than 0.9 percent.

2 For comparison, existing daily traffic entering and exiting LBNL is approximately 5,700 vehicles per weekday.

Conclusion

There is no indication that the alternative-sequence project variant could materially change any of these traffic characteristics of the worker or truck traffic or their impacts. The alternative-sequence variant would not increase the total number or frequency of truck trips, would not increase the workforce and would not increase the amounts of hazardous materials to be removed from the site or the way in which they would be transported. Thus, there would be no material changes in the characteristics related to this traffic. The difference would only be the order in which these phases would occur. Since the demolition phase and the shielding block removal have similar traffic characteristics, switching their order would have no material traffic effect, either directly or as a cumulative traffic effect.[3] Because the actual peak in the truck traffic related to the project would only occur at the end of the project (during the backfilling phase), this peak effect would not be altered in any way under the alternative sequence for the project.

The alternative-schedule project variant, applied to either the project or to the alternative-sequence project variant, would reduce the minimum duration of the project from four years to three and a half years, indicates that there might be a roughly 13 percent reduction in the duration of the overall time to complete the project (or the alternative-sequence project variant). This could result in similar percentage reductions in the durations of any or all of the individual project phases, with accompanying increases in the rates of truck traffic, but without increases in the total number of trips. However, only in the final site-backfill phase could increases in haul truck traffic have any adverse effect, since that is the only phase where the maximum haul truck traffic, 18 to 34 one-way trips per day, would occur. Even during that backfilling phase, increases in haul truck traffic at the lower end of that range would not make a measurable difference, while any increases that would otherwise exceed the maximum rate would trigger the operative mitigation, Mitigation Measure IV.K-1, which would limit the frequency of truck trips (loaded or empty) to no greater than (a) one every 10 minutes (six truck trips per hour) during the a.m. and p.m. peak commute hours, and (b) one every five minutes (12 truck trips per hour) during periods other than the a.m. and p.m. peak commute hours.

Thus, Mitigation Measure IV.K-1 would limit truck traffic under the alternative schedule variant to the same maximum truck traffic rates as truck traffic under the proposed project. For these reasons, reducing the minimum duration of the project from four years to three and a half years would not increase the maximum haul truck traffic generation rates and therefore would not change those resulting impacts and mitigation measures.

Similarly, traffic-related impacts such as exposure to DPM from trucks and to radioactive materials hauled on roadways would be the same under the alternative schedule variant, the alternative-sequence variant and the project, since all such effects would be due only to the total exposures to DPM and radioactive materials, which would be the same under all three cases.

[3] Public concern has been expressed regarding the cumulative effects of this project coupled with the larger construction activities involved with the building program being carried out under the UC Berkeley 2020 LRDP.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Transportation/Traffic	Equal impact	Less than Significant	None necessary

4.12 Utilities, Service Systems, and Energy

Many of the potential impacts identified in the DEIR would be unchanged with the revised sequence of activity. Utility systems would be rerouted to maintain service to other areas of LBNL prior to disconnection at Building 51. No new utilities would be required. The project would generate the same amount of demolition waste and debris and would still require limited quantities of water for dust suppression. With the revised sequence there could be an increase in the amount of water used for dust suppression during the demolition activities; the amount of water that would have to be collected and processed to prevent release of contaminants to storm drains or sewers is expected to be negligible. As discussed in Hydrology above, the removal of the building would require a drainage collection system for collection of stormwater runoff during the remaining demolition activities. The exposure of the Bevatron and shielding blocks would require collection of stormwater prior to discharge to ensure that contaminants are not contained in the water. However, this would be similar to the situation that would exist with the DEIR project after demolition of the building structure but during the demolition of the foundations and slabs. Implementation of additional site drainage control measures and mitigation measures from the 1987 LRDP EIR, as amended, could control the runoff and there would be no change to the significance of the water quality impact or the effect on the sewers or storm drains. With the revised sequence, the project would no longer require the use of the cranes onsite for the removal of the shielding blocks. In their place, mobile diesel-powered cranes would be brought onsite to perform the block removal.

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Utilities, Service Systems, and Energy	Equal impact	Less than Significant	None necessary

5. Summary

The proposed revised sequence of demolition activities would introduce no new impacts that are not already identified in the original DEIR. In most cases, the revised sequence would have no effect on the impacts originally discussed in the DEIR. With the exception of Cultural Resources, all impacts would remain less than significant, while the Cultural Resources impact would remain significant and unavoidable.

The environmental topic for which the revised sequence would have the most effect is Hydrology and Water Quality. As noted above, site drainage controls are already in the project; however, with the revised sequence, these controls would require increased capacity to manage demolition-contact stormwater. While the total amount of stormwater runoff would not change with the

revised sequence, there would be an increase in the amount of stormwater runoff that would be in contact with materials housed within the facility (e.g., dust, equipment, demolition debris, etc.). This demolition-contact stormwater would therefore need to be controlled and managed so that water quality is verified prior to its release into the stormwater collection system. Demolition-contact stormwater not meeting water quality standards would be treated and/or, if appropriate and permitted, diverted to the sanitary sewer system. Increased volumes of handling of the demolition-contact stormwater would not alter the significance of the impact because the regulatory controls would be consistent in protecting water quality to receiving waters. Therefore, the impacts to Hydrology and Water Quality would remain less than significant and no additional mitigation measures would be necessary.

Table G-1 presents the results of the alternative sequence analysis, showing that the environmental impacts of the revised sequence for the project should be no different than the project impacts as presented and analyzed in the October 21, 2005 DEIR.

TABLE G-1
COMPARISON OF IMPACTS FOR DEMOLITION OF BUILDING 51 AND BEVATRON, REVISED SEQUENCE VS. DEIR SEQUENCE

Topic	Impact RE: DEIR project	CEQA Significance	Added mitigations?
Aesthetics	Equal impact	Less than Significant	None necessary
Air Quality	Equal impact	Less than Significant	None necessary
Biological Resources	Equal impact	Less than Significant	None necessary
Cultural Resources	Equal impact	Significant and Unavoidable	None available
Geology and Soils	Equal impact	Less than Significant	None necessary
Hazards and Hazardous Materials	Equal impact	Less than Significant	None necessary
Hydrology and Water Quality	Equal impact	Less than Significant	None necessary
Land Use and Planning	Equal impact	Less than Significant	None necessary
Noise	Equal impact	Less than Significant	None necessary
Public Services	Equal impact	Less than Significant	None necessary
Transportation/Traffic	Equal impact	Less than Significant	None necessary
Utilities, Service Systems, and Energy	Equal impact	Less than Significant	None necessary

APPENDIX H

Response to Letter of Concern from the Public Regarding the National Historic Preservation Act

Preserving America's Heritage

September 5, 2007

Ms. L. A. Wood
Ms. Pamela Sihvola
Committee to Minimize Toxic Waste
P.O. Box 9646
Berkeley, CA 94709

REF: Department of Energy's plans for the Bevatron and Building 51 at the Lawrence Berkeley National Laboratory

Dear Ms. Wood and Ms. Sihvola:

On July 12, 2007 the Department of Energy (DOE) provided the ACHP with information concerning steps it has taken to allow the pubic opportunity to comment on its plans to demolish the Bevatron and Building 51, a property determined eligible for listing in the National Register of Historic Places. A copy of their response is enclosed.

DOE's response sets out its public outreach activities since execution of the Memorandum of Agreement (MOA) in 1997. After review of their response we believe that DOE has provided the public with sufficient opportunity to make its views known about the importance of this historic property, and has considered these comments in reaching its decision on the fate of the property. Further, DOE reevaluated the terms of the existing MOA, and found no reason to revise it. We do not dispute DOE's assessment. We believe DOE has met its responsibilities under Section 106 of the National Historic Preservation Act for this undertaking.

If you have any questions, do not hesitate to contact Dr. Tom McCulloch at 202-606-8554 or via e-mail at tmcculloch@achp.gov.

Sincerely,

Reid J. Nelson
Assistant Director
Federal Property Management Section
Office of Federal Agency Programs

Enclosure

ADVISORY COUNCIL ON HISTORIC PRESERVATION

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Preserving America's Heritage

September 7, 2007

The Honorable Barbara Lee
U.S. House of Representatives
ATTN: Sarah Andropoulos
1301 Clay Street
Suite 1000N
Oakland, CA 94612

REF: Letter from Ms. L. A. Wood and Pamela Sihvola concerning fate of Bevatron and Building 51 at the Lawrence Berkeley National Laboratory

Dear Congresswoman Lee:

As you requested in your letter to us dated August 24, 2006, we are forwarding to you a copy of our letter to Ms. Wood and Ms. Sihvola regarding the referenced Department of Energy (DOE) project. As you will see from our reply, we believe DOE has provided the public with ample opportunity to express its views on the historic significance of the Bevatron and Building 51 as DOE moves forward with its plans for this historic property.

If we can be of further assistance, or if you have any questions, please do not hesitate to call me or Dr. Tom McCulloch at 606-8505.

Sincerely,

John M. Fowler
Executive Director

Enclosure

ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004
Phone: 202-606-8503 • Fax: 202-606-8647 • achp@achp.gov • www.achp.gov

APPENDIX I

National Park Service Acceptance of Historic American Engineering Record for Building 51/51A, Bevatron Building

C: B. Saunk
C. Schwab

United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
1111 Jackson Street, Suite 700
Oakland, CA 94607

T. Powell
J. Phillber
file: B51 NEPA/CEQA (HAER/HABS)

H40(PWR-CR)

August 15, 2006

Aundra Richards
Site Manager, Berkeley Site Office
1 Cyclotron Road, MS 90-1023
Berkeley, CA 94720

Re: HAER documentation for Building 51/51A, Bevatron Building, HAER No. CA-168-A

Dear Ms. Richards:

The National Park Service acknowledges the receipt of and accepts the Historic American Engineering Record (HAER) documentation for the project referenced above.

The completed documentation will be transmitted to the Prints and Photographs Division of the Library of Congress. The records are in the public domain and will be accessible through the library. We will also transmit a copy of the documentation to the State Historic Preservation Officer.

We appreciate this addition to the documentation of America's historic engineering heritage.

Sincerely,

Elaine Jackson-Retondo, Ph.D.
National Register and National Historic Landmarks Program
Pacific West Regional Office

cc: Jennifer Hall, Collections Manager, Department of the Interior, NPS, HABS/HAER/HALS Division, 1849 C Street NW, 2270, Washington, DC 20240
Milford Wayne Donaldson, FAIA, State Historic Preservation Officer, Department of Parks and Recreation, Post Office Box 942896, Sacramento, CA 94296-001
Kelly Yasaitis, Advisory Council on Historic Preservation 1100 Pennsylvania Ave. NW, Room 803, Washington, DC 20004-2501