III PROPOSED ACTION AND ALTERNATIVES

III.A. Proposed Action

The Proposed Action would remove approximately 43,000 gross square feet (gsf) of office and laboratory space through the demolition of two buildings (25/25B and 55) rated "very poor" and "poor" respectively under the UC Seismic Rating system[1] and six antiquated trailers (71C, D, F, J, K, and P) that cannot be cost-effectively upgraded. Approximately 43,000 gsf of replacement space would be provided in a new general-purpose laboratory and office building (GPL). Under the Proposed Action, the GPL 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 rated "poor" under the UC Seismic Rating system. The locations of these project components are shown on Figure III-1.

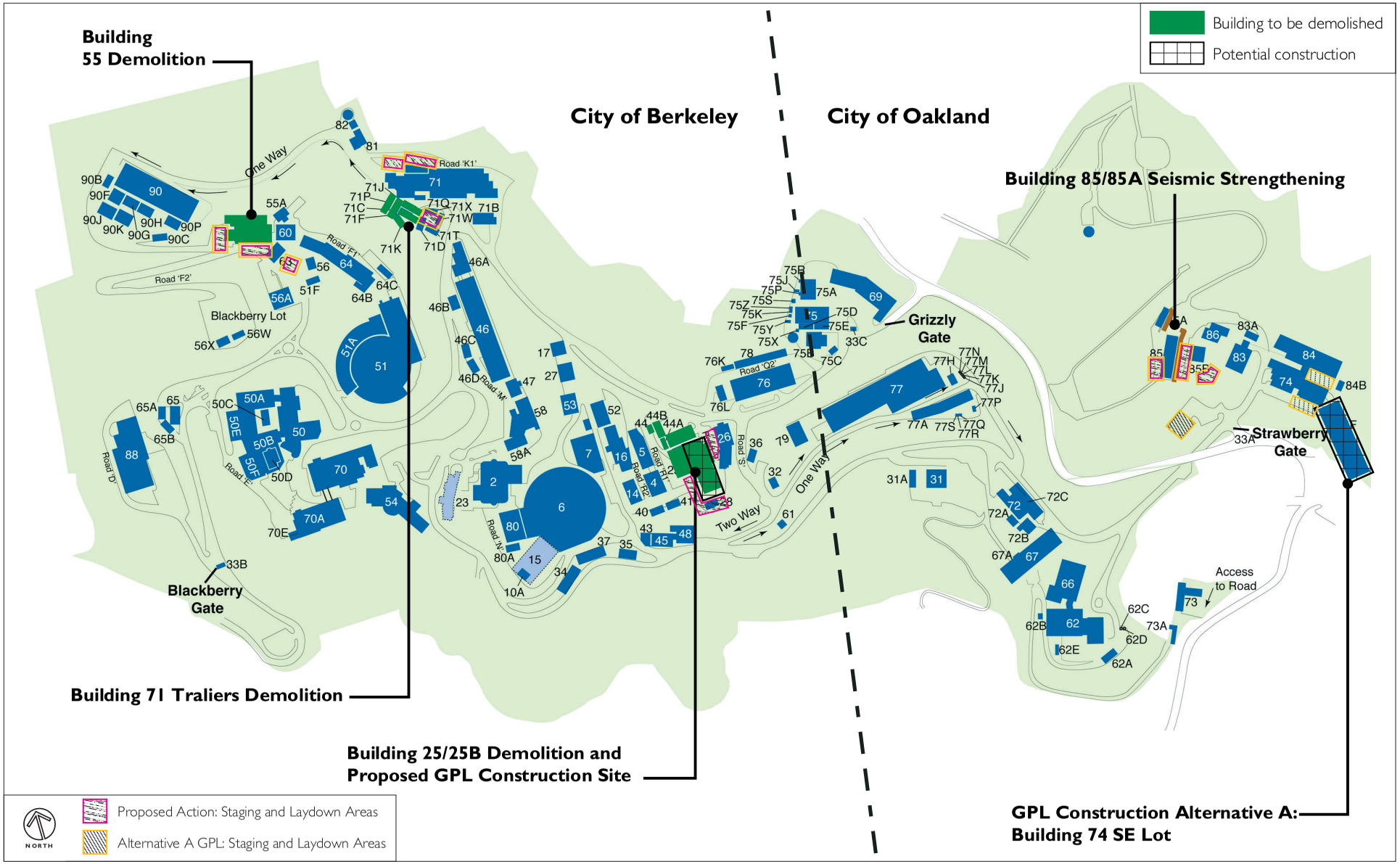
The Proposed Action would be funded by the Department of Energy (DOE) and operated and managed by the UC, under contract to the DOE. The DOE and UC would execute a supplemental lease agreement to define the lease parcel and its demised term for the final location of the GPL.

III.B. Components of the Proposed Action

The primary components of the Proposed Action are shown below in Table III-1 together with their anticipated timeframes. Work associated with the Proposed Action would begin in late 2010 and it is anticipated that demolition and construction components would be completed by late 2013 and that the GPL would become operational in early 2014.

In the aforementioned contract with the DOE, UC committed that all construction activities at UC LBNL would comply with applicable laws and regulations that govern the exposure of workers, the public, and the

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



Source: Lawrence Berkeley National Laboratory

FIGURE III-1

COMPONENTS OF THE PROPOSED ACTION

TABLE III-1 **TIMELINE AND COMPONENTS OF THE PROPOSED ACTION**

Component	Start	Finish
Demolition of Building 25/25B	late 2010	mid 2011
Demolition of Building 55	early 2013	early 2014
Demolition of Building 71 trailers C, D, F, J, K, and P	late 2012	early 2013
Seismic strengthening of Building 85/85A	mid 2011	mid 2012
Construction and commissioning of a new General Purpose Laboratory (GPL) on the site of the existing Building 25/25B	mid 2011	late 2013
Relocation of personnel and equipment to GPL	early 2014	
Operation of the GPL (estimated)	early 2014	2064
Removal of the GPL (estimated)	2064	2064

environment to hazardous materials, and would also comply with UC LBNL-specific policies. This project incorporates Standard Project Features (SPF) described in detail in Section III.E.

III.B.1. Demolition of Building 25/25B

This component of the Proposed Action would involve the demolition of Building 25 as well as the decommissioning and demolition of the smaller separate wooden building to the west that houses the Fixed Treatment Unit (FTU), known as Building 25B. The FTU has treated aqueous and metal-containing waste generated from operations at Building 25 since 1986. Along with five other FTUs at LBNL, the FTU at Building 25B has operated under a single permit from the City of Berkeley. The City has approved a plan for the decommissioning of Building 25B.[2]

[2] Al-Hadithy, Nabil. Toxics Management Division, City of Berkeley. Personal communication with DC&E, November 23, 2009.

Operations formerly located at Building 25 have already been relocated to Building 77 which has its own treatment facilities. A small metal chemical storage shed on the west side of Building 25, which is labeled 25C on the outside, would also be removed. These buildings slated for demolition are referred to in this report as Building 25/25B. Together they comprise 20,663 gsf with a footprint of 17,100 square feet. The adjacent Building 25A is not planned for demolition under the Proposed Action. Building 25/25B is currently vacant.

III.B.1.a. Building 25/25B: Site Preparation, Staging and Tree Protection

Staging and laydown areas would be located in paved or developed areas. The staging and laydown area for Building 25/25B demolition and for the GPL construction would be located between Buildings 25 and 26 and on the south and west sides of Building 25.

The Building 25/25B site is adjacent to an irrigated grove of redwood trees that would be protected during the construction of the proposed GPL. As is standard UC LBNL practice, an arborist has surveyed these trees and UC LBNL would follow recommended measures to ensure their health throughout the construction period.[3]

III.B.1.b. Building 25/25B: Pre-demolition Survey, Removal, and Disposal of Hazardous Materials/Equipment

A survey to identify hazardous materials at Building 25/25B, 55, and 71 trailers was conducted during 2008.[4] The survey identified asbestos-containing materials in thermal pipe insulation, sheetrock, floor tile, transite interior and exterior panels, acoustical ceiling tile, sink undercoating material, and roofing materials at Building 25. Lead-based paint was identified on interior surfaces in Building 25. Other hazardous materials noted during the Building 25/25B

[3] Brian W. Fenske, 2009. Arborist Report. Site: LBNL "Old Town" Demo Site, March 25, 2009.

[4] Winzler & Kelly, 2008, Hazardous Materials Survey, Seismic Upgrade Phase II, Lawrence Berkeley National Laboratory, October.

survey included fluorescent light fixtures with presumed PCB ballasts and lighting tubes, coolant gases, mercury thermostats, and an electrical trench with metal debris.

Interior materials likely requiring abatement would include thermal insulation, floor tile, and sheetrock walls. Exterior materials anticipated to require abatement include roofing, exterior building cladding, and painted surfaces. These materials would likely be removed by labor crews using small tools and equipment, but may also involve the use of equipment such as scaffolding or motorized boom lifts in order to reach the affected areas.

Building demolition would comply with the LBNL Radiological Work Permit Program. Building 25, where radiological materials have been used historically, would be surveyed by a Radiological Control Technician prior to removal of fume hoods, exhaust fans, ducting, vacuum systems, and flooring. LBNL Environment Health and Safety (EH&S) staff would perform a final inspection prior to releasing the space for demolition or construction activity. Any areas found to have building-related radiological or other hazards remaining would be cleaned and decontaminated under the oversight of UC LBNL industrial hygienists and health physicists.

The project manager would develop a communications plan to ensure that UC LBNL personnel and contractors are informed about hazards at the construction site in compliance with LBNL Environment Health and Safety Procedures. Regular project site evaluations would be performed during project construction by a safety professional and project engineer to monitor the effectiveness of implemented measures.

III.B.1.c. Building 25/25B: Demolition and Disposal

The demolition of the building superstructure would be performed using an excavator fitted with a processing head to bring down larger portions of the building structure. The resulting debris would either be temporarily stockpiled at the site for future removal by truck, or would be removed concurrently with the demolition effort.

The demolition of the concrete slab on grade and foundations would be accomplished utilizing an excavator fitted with a boom-mounted hydraulic concrete-breaking hammer. Any required localized demolition may be performed by labor crews utilizing compressors and pneumatic jackhammers. The spoils from the concrete breaking efforts would then be removed using a front end loader or an excavator utilizing a boom-mounted bucket to load the materials onto large dump trucks for transportation from the site.

Demolition waste would be separated into four categories: material to be recycled, material to be salvaged, general construction waste, and hazardous waste. Hazardous waste would typically be asbestos or lead containing material. If any material is found with chemical or radiation contamination, it would be handled separately. General construction waste would be removed and trucked to a nearby landfill, such as the Altamont Landfill in Livermore, about 30 miles from LBNL. Hazardous waste disposal would be coordinated by the LBNL Waste Management (WM) Group.

III.B.1.d. Building 25/25B: Soil Excavation and Soil and Groundwater Sampling and Analysis

Initial testing found no indication of significant soil or groundwater contamination in the area around Building 25.[5] Building 25/25B would be demolished down to the concrete slab which underlies it, and then additional soil testing would be performed by drilling through the slab. Next, the slab would be demolished and additional soil testing would likely be performed. If Building 25/25B does not become the choice for GPL construction, it is expected that the area would be excavated to a depth of 3 feet. As it is located in an area of active groundwater remediation, the excavation would then be paved over to prevent rainwater intrusion. If it is chosen as the site for GPL construction, excavation would be to a greater depth, sufficient to accommodate the foundations of the new GPL. The precise depth is not known at this

[5] Environment, Health and Safety Division, and Earth Sciences Division, LBNL, April, 2010. *Initial Evaluation of Potential Subsurface Contamination Under Building 25*.

time, but it is possible that groundwater could be encountered. If groundwater is encountered, it would be tested in accordance with a site-specific Groundwater Monitoring and Management Plan (GMMP), required by UC LBNL standard operating procedures, as described in the LBNL Capital Project Procedures Manual. Likewise, soil from the excavation would be tested in accordance with the site-specific Soil Management Plan (SMP).

The soil and groundwater at the Building 25/25B site has been remediated for known contamination as part of a rigorous Resource Conservation and Recovery Act (RCRA) Corrective Measures Implementation (CMI). There is still an active groundwater remediation system in place. Levels measured most recently in soil and groundwater in the construction area are below those considered to pose a risk to construction workers, although it is possible that further contamination would be revealed after the building is demolished and the underlying concrete slab removed. The RCRA CMI required a Soil Management Plan and a Ground Water Monitoring and Management Plan. The Plans provide general procedures for the management and disposal of waste soils and contaminated ground water generated during construction activities. Testing would be performed in accordance with the plans to evaluate potential risks and to comply with landfill screening criteria.

If contamination is detected during pre-construction testing, the specifications for seismic improvements would incorporate necessary measures to prevent the detected contamination from migrating. Notification and corrective action for newly discovered environmental releases of hazardous constituents would meet the requirements in the LBNL Hazardous Waste Facility Permit (EPA ID No. CA 4890008986), Section VI.B "Newly Identified Releases." Cleanup standards and methods would be consistent with LBNL's *Environmental Assessment and Corrective Measures Study Report for Remediating Contamination at LBNL Regulated under the Resource Conservation and Recovery Act* (DOE/EA-1527). In the event that contamination is detected, LBNL Environmental Health and Safety (EH&S) procedures and SPF HAZ-3 (e) from the Standard Project Features included in Appendix A of this EA, which is incorporated by reference, would be implemented so as to prevent worker

exposure or migration of that contamination by implementing employee communication and training requirements.

After testing, if contamination were to be found at levels considered to pose risk, excavated soil would be disposed of at a class II/III[6] landfill such as Altamont Landfill in Livermore, about 30 miles from LBNL. No material would be stockpiled for an extended period.

III.B.2. Building 55 Demolition

This component of the Proposed Action would involve the demolition of Building 55, a wet chemistry laboratory and office facility rated as seismically "poor" under the University of California Seismic Rating System. Building 55 is a one-story structure with a two-story addition and 19,048 gsf of space (Figure III-1). The 75 occupants of the existing building would be relocated to other LBNL buildings.

III.B.2.a. Building 55: Site Preparation, Staging, and Vegetation Removal

The staging and laydown areas for Building 55 demolition would be in the parking lots on the west and south sides of Building 55 and southeast side of Building 63. Some ornamental shrubs would need to be removed from around Building 55 in the course of demolition work.

III.B.2.b. Building 55: Pre-demolition Survey, Removal, and Disposal of Hazardous Materials/Equipment

The hazardous materials survey identified asbestos-containing materials in carpet and other flooring materials, ventilation systems, and roofing materials in Building 55.[7] Lead-based paint was identified on interior surfaces in Building 55. Other hazardous materials noted during the survey included fluores-

[6] Class II/III landfills receive a variety of materials, including construction material and debris, hazardous materials such as asbestos and contaminated soils, metal, organics, papers, and other special materials.

[7] Winzler & Kelly, 2008, Hazardous Materials Survey, Seismic Upgrade Phase II, Lawrence Berkeley National Laboratory, October.

cent light fixtures with presumed PCB ballasts and lighting tubes, coolant gases, mercury thermostats, and hydraulic fluid for elevators at Building 55. The process for removal of this material prior to demolition would be the same as described above for Building 25/25B in Section III.B.1.b.

Radiological materials have been used at Building 55. Procedures to ensure radiological contamination is detected and affected materials removed, would be the same as outlined above for Building 25/25B.

III.B.2.c. Building 55: Demolition and Disposal

Equipment and procedures used for demolition and disposal of the building superstructure and the concrete slab on which it rests would be the same as described above in Section III.B.1.c. Building 55 would be removed in its entirety and the site excavated to approximately 3 feet below grade.

III.B.2.d. Building 55: Soil Excavation and Soil and Groundwater Sampling and Analysis

Some soil removal is expected. Sampling, removal, handling, and disposal would be done as described in detail in Section III.B.1.d.

III.B.3. Building 71 Trailers C, D, F, J, K and P Demolition

This component of the Proposed Action would involve the demolition of six of the nine modular trailers (71C, D, E, J, K, and P) located to the southwest of Building 71. The trailers have a total gross square footage and footprint of 3,822 square feet and currently house 34 occupants, who would be relocated to other LBNL buildings upon demolition of the trailers. Building 71 trailers T, W, and X would remain occupied and in use on the site.

III.B.3.a. Building 71 Trailers: Site Preparation and Staging

The staging and laydown area for Building 71 trailers would be in the parking lot around the trailers and the parking lot northwest of Building 71. No trees or plantings would be removed as a result of demolition activities.

III.B.3.b. Building 71 Trailers: Pre-Demolition Survey and Dismantling of Hazardous Material Structures

The hazardous materials survey identified asbestos-containing materials in floor tiles and window caulking at the Building 71 trailers. Other hazardous materials noted during the survey included fluorescent light fixtures with presumed PCB ballasts and lighting tubes, coolant gases, and mercury thermostats.[8] No lead containing paints or coatings were detected. The process for removal of this material prior to demolition would be the same as described above for Building 25/25B in Section III.B.1.b.

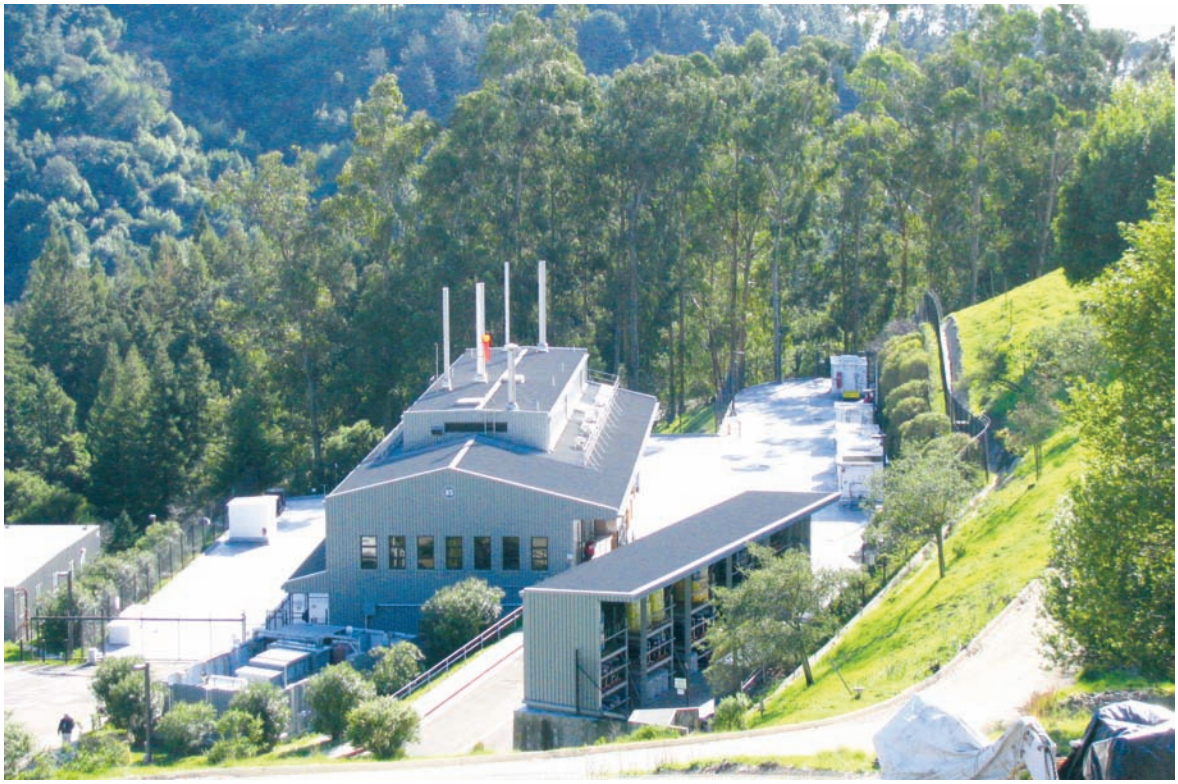
III.B.3.c. Building 71 Trailers: Demolition and Disposal

The trailers would be demolished and removed, including foundations, down to the level of the asphalt and trucked off-site for landfill disposal. No soil excavation is anticipated. Demolition would likely be performed using an excavator fitted with a processing head. These materials would either be temporarily stockpiled at the site for future loading out via truck, or would be loaded out concurrently with the demolition effort.

III.B.4. Building 85 Seismic Strengthening

This component of the Proposed Action includes a seismic upgrade to Buildings 85/85A, which is part of the LBNL HWHF. As shown in Figures III-2 and III-3, the HWHF consists of Building 85, Building 85A, the associated yard area, six hazardous waste handling sheds, a flammable solvents consolidation shed, a flammable/combustible liquid storage shed, a mixed waste storage shed, a storage shed, and a diesel generator with a 56-gallon diesel above-ground storage tank (used as a day tank) and a 2,500-gallon diesel underground storage tank. Hazardous wastes from UC LBNL laboratories are consolidated at Building 85, the main building of the facility.

[8] Winzler & Kelly, 2008, Hazardous Materials Survey, Seismic Upgrade Phase IIs, Lawrence Berkeley National Laboratory, October.

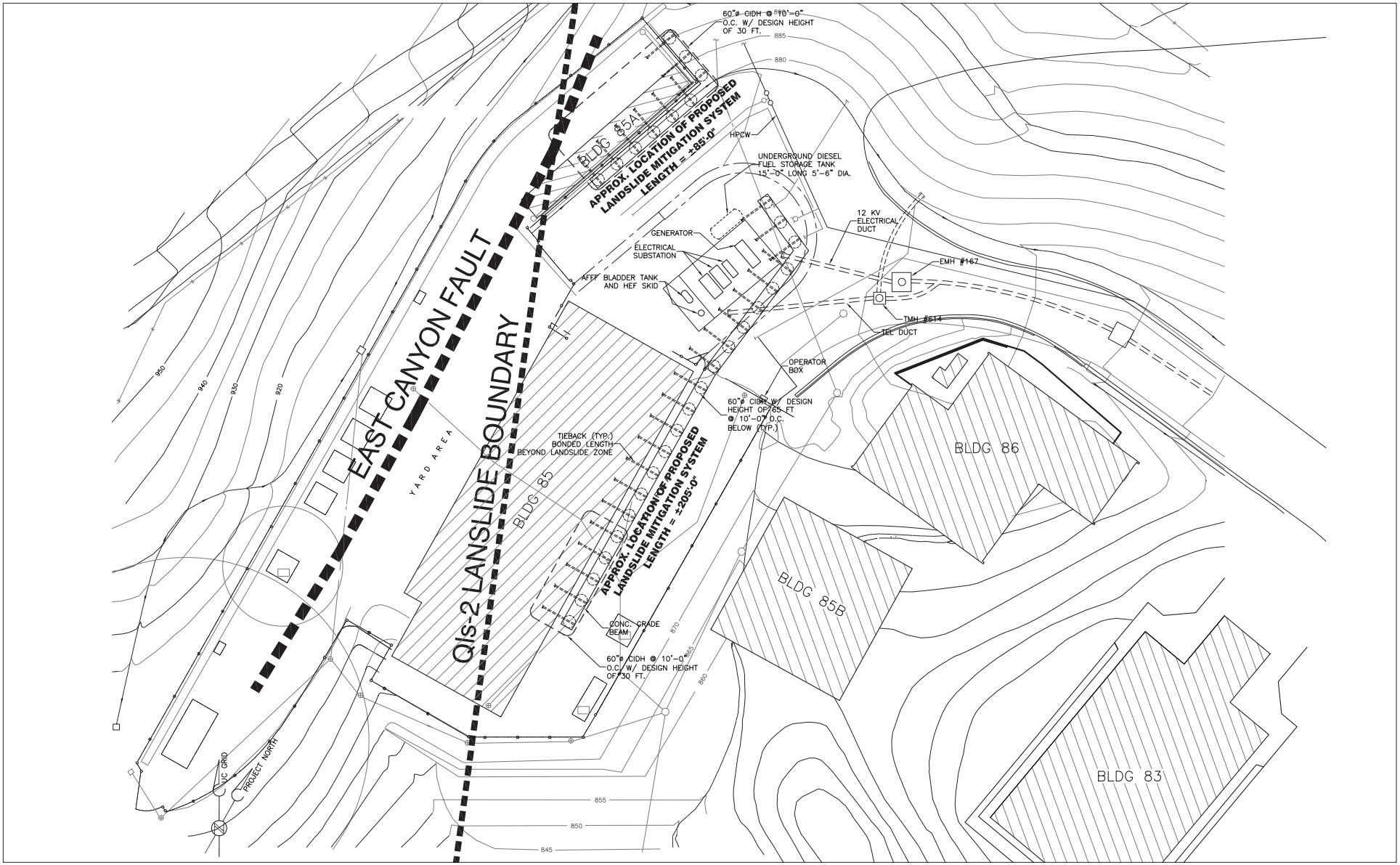


Proposed locations for underground retaining structures, such as pier foundations and tie backs

Source: Lawrence Berkeley National Laboratory

FIGURE III-2

AERIAL VIEW OF BUILDING 85/85A COMPLEX



Source: 100% Conceptual Design Report

FIGURE III-3

BUILDING 85/85A SEISMIC STRENGTHENING, PRELIMINARY DESIGN

Building 85 has three floors. The first floor of Building 85 houses radioactive waste activities, including waste handling, storage, compaction, solidification, and decontamination. The first floor also contains a dry/clean waste storage area and one of two mechanical storage rooms. The second floor contains the chemical waste preparation and storage areas and administrative offices. The third floor houses HVAC equipment and the second mechanical equipment room.

The facility, referred to subsequently as Building 85/85A, provides treatment and storage of hazardous, radioactive, and mixed waste from LBNL. Constructed in 1996, Building 85 became operational in April 1997. Geotechnical investigation of an adjacent construction site between 2004 and 2006 raised concerns that the ancient landslide deposits could present a hazard to existing Buildings in the vicinity, including Building 85/85A. Additional review in 2007 indicated that, although the landslides are stable under normal conditions, they could be mobilized in the event of a major earthquake, posing a potential hazard to the Buildings 85/85A structures. The Proposed Action would include upgrades which would prevent movement of the underlying slide in an earthquake. The proposed upgrade does not change the operation of the building or extend its intended life. Building 85/85A would remain occupied and in use while the seismic strengthening work is performed.

III.B.4.a. Building 85/85A: Performance Standards for Seismic Strengthening
The proposed seismic strengthening system is designed to ensure that the facility would meet the following performance standards during a major seismic event:

- The hazardous/radioactive waste stored in Building 85 would not be released to the environment;
- A safe shutdown of the facility; and

- Basic life safety.[9]

The seismic strengthening system would be designed to resist the maximum ground motion from earthquakes that would be expected to occur, on average, once every 475 years. Building 85/85A would have a rating of "good" under the University of California Seismic Rating system after completion of the improvements.

III.B.4.b. Building 85/85A: Seismic Strengthening Work

Sub-grade piers for the seismic strengthening at Building 85 would be installed below the building overhang in the lower yard. Piers would also be installed on the southeast and northeast sides of Building 85A as shown in Figure III-3. These piers would prevent movement of the underlying slide in an earthquake. The piers would be drilled. To install the piers, a 4- to 5-foot-wide, 40- to 50-foot-deep hole would be drilled with an auger, and a metal cage or caisson would be inserted to support the hole. The hole would then be gradually filled with concrete. The work would not take place during rainy weather.

Additional work inside Building 85/85A, consisting of out-of-plane bracing for third floor girders supporting the discontinuous penthouse columns, would strengthen the building's first story shear walls and other lateral force systems.

III.B.4.c. Building 85/85A: Soil Excavation and Soil and Groundwater Sampling and Analysis

Site preparation for Building 85/85A improvements would include removal of a portion of the building's at-grade concrete operations area, asphalt driveways, and minor vegetation.

[9] RMW Architecture and Interiors, July 15, 2008, *100% Conceptual Design Report, Seismic Life-Safety, Modernization, +Replacement of General Purpose Buildings, Phase II*.

Excavation is expected to generate approximately 1,800 cubic yards of soil to be disposed off-site in a landfill. Sampling, removal, handling, and disposal would be done as described in detail in Section III.B.1.d.

In 1996, a preoperational survey of the HWHF was conducted that included the collection and analysis of samples of soil, groundwater, air, sediment, stormwater, and sanitary sewer discharges.[10] Low concentrations of tritium and petroleum hydrocarbons were detected in some soil samples. The source of the tritium was past emissions from the former National Tritium Labeling Facility (NTLF), which ceased operations in December 2001. Tritium has not been detected in soil water samples from the Building 85/85A area since the preoperational survey.

Groundwater would probably be encountered during the installation of the piers and it would be tested according to specifications described in the GMMP. Depth to groundwater at monitoring well, MW 85-96-2, which is south of Building 85, is generally between 40 and 35 feet below ground surface, and groundwater at MW 85-96-1 north of Building 85 and southwest of Building 85 is between 16 and 12 feet. Depth to groundwater at MW 85-95-2, which is located on east of Building 85A, is between 24 and 0.3 feet below ground surface.

III.B.5. GPL Construction and Operation at the Building 25/25B Demolition Site

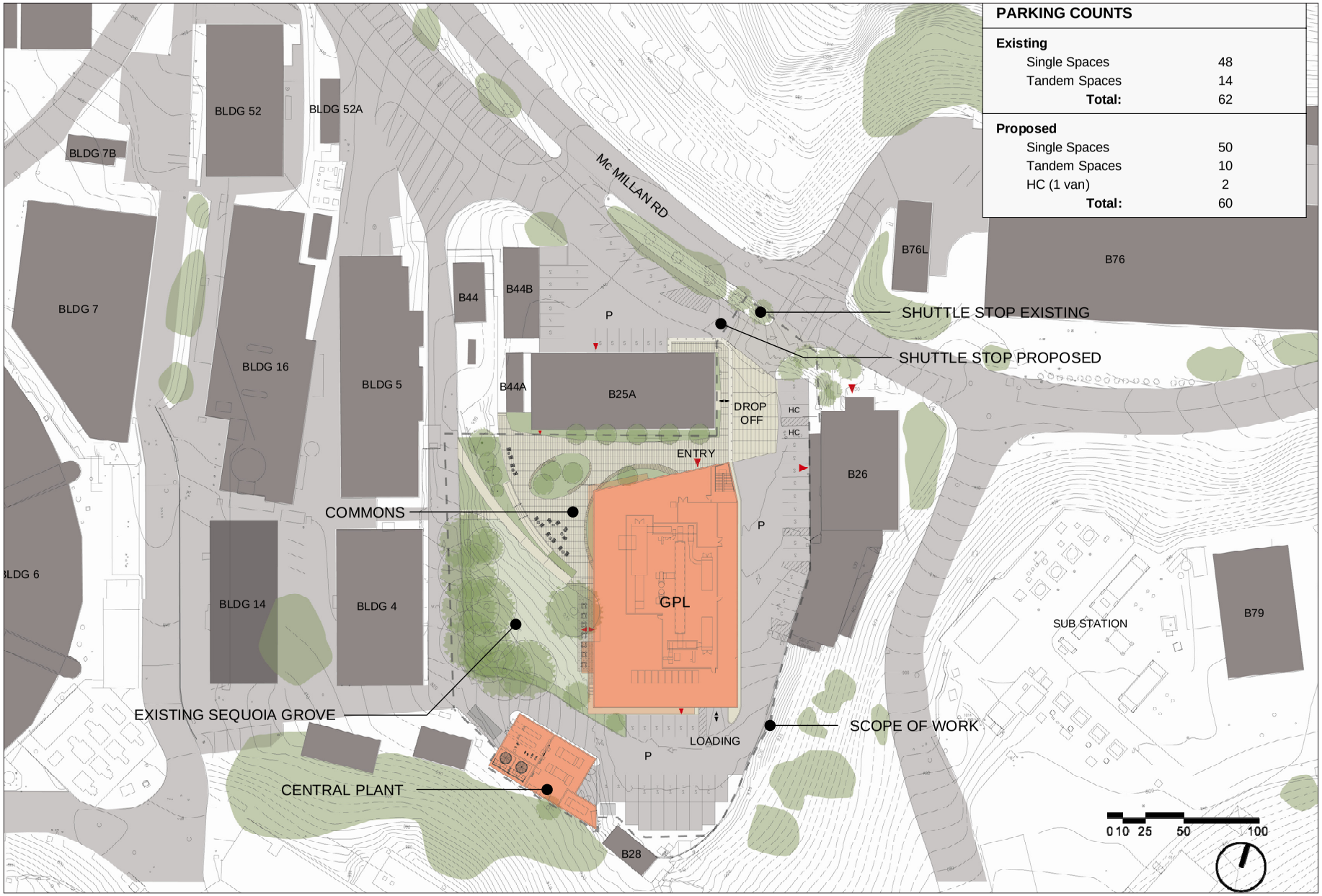
Under the Proposed Action, a GPL of approximately 43,000 gsf, with a footprint of approximately 13,600 square feet would be built on the Building 25/25B demolition site. No undeveloped land would be disturbed in this construction project. Figure III-4 shows an aerial view of the Building 25/25B site, which is in the center of LBNL. Figure III-5 shows the site plan for the GPL, and Figure III-6 an architectural rendering of the proposed building.

[10] The Envirosystems Group, October 1996, Baseline Report for Pre-Operational Monitoring of Hazardous Waste Handling Facility – B85.

Source: RMW architecture & interiors

FIGURE III - 4

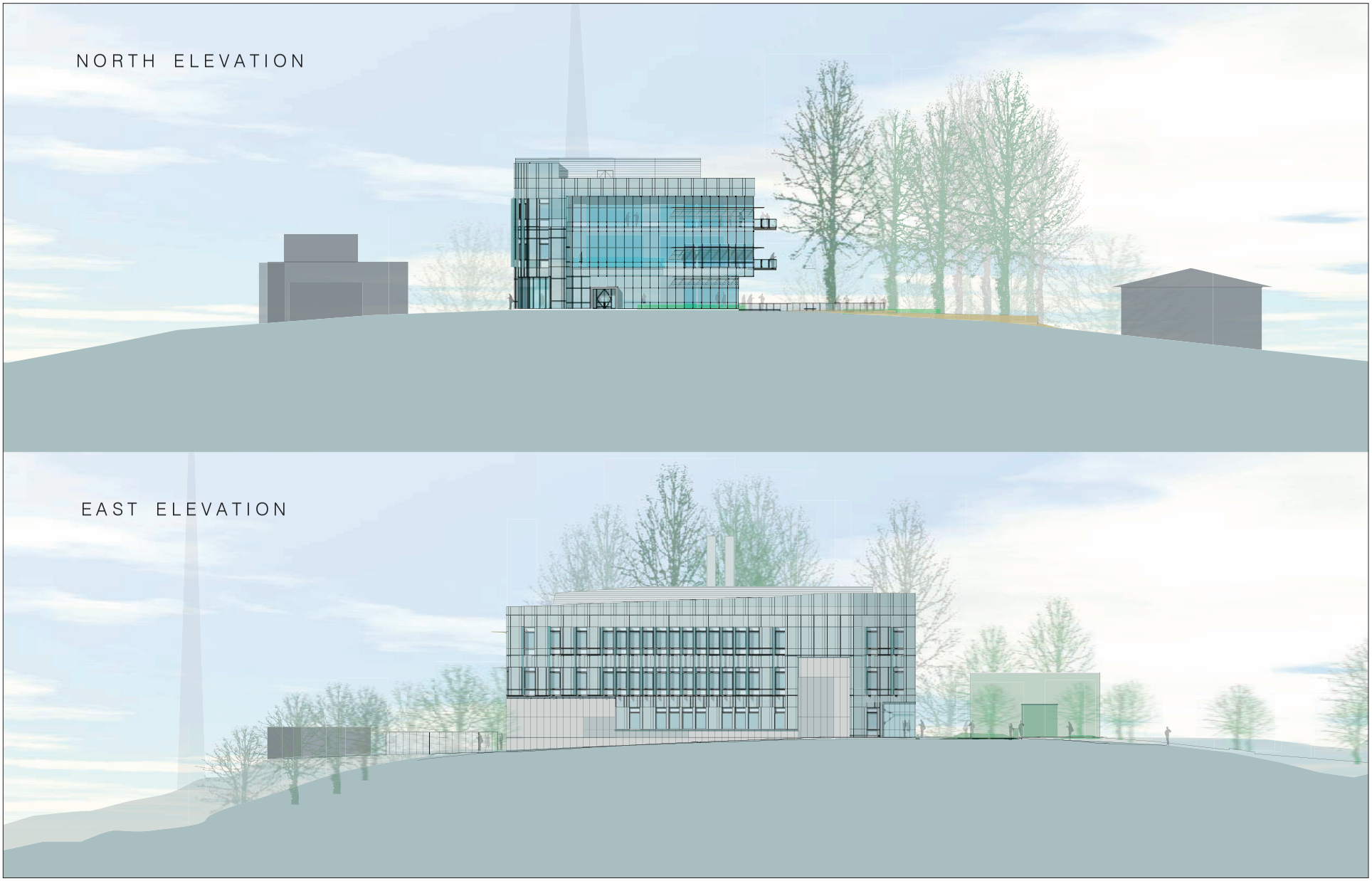
AERIAL VIEW OF BUILDING 25/25B COMPLEX



Source: RMW architecture & interiors

FIGURE III-5

PLAN OF GPL AT BUILDING 25/25B SITE



Source: RMW architecture & interiors

FIGURE III-6

NORTH AND EAST ELEVATIONS OF PROPOSED GPL

Staging and laydown areas would be the same as those used for demolition of Building 25/25B.

The proposed GPL would be three stories high and approximately 55 feet tall (as measured to the top of the building parapet). Two exhaust stacks approximately 30 feet in height would protrude from the top of the building bringing the tallest point of the building to around 85 feet.

III.B.5.a. GPL at Building 25/25B Site: Site Preparation and Staging

Site preparation and staging areas would be as described above under Section III.B.1.a.

III.B.5.b. GPL at Building 25/25B Site: Excavation and Soil and Groundwater Sampling and Analysis

This was described above under Section III.B.1.d.

III.B.5.c. GPL at Building 25/25B Site: Utilities, HVAC, and Exhaust Systems

The GPL would use the existing electrical, water, and sewer utility systems that currently serve the Building 25 complex, with some minor additions. A new fire hydrant would be added to the southeastern side of the proposed building, where there is an existing 12-inch main. A new storm drain line about 125 feet in length would be installed to replace the existing line, which is partially blocked and undersized for the current drainage area around Building 25. The drain would run from the southeastern corner of the new building east through the neighboring hillside to a connection point on Segre Road.

A new sanitary sewer line would also be added for the GPL, in accordance with the UC LBNL Sanitary Sewer System Management Plan (SSSMP) of September 30, 2009. Preliminary design documents call for a 6-inch diameter pipe with two routing options: either a run of approximately 500 feet west from the proposed GPL between existing buildings, or a run of approxi-

mately 650 feet north and then west from the GPL. Both routing options would pass entirely through previously developed land.

The exact points of utility connections and drain locations would be determined based on the development of the design. There would be some rerouting of utilities for building access. Additionally, a building utility plant would be located on grade to house chillers, a cooling tower, electrical transformer, and an emergency generator.

GPL interior building systems that would require exterior ventilation would include heating and air conditioning units and bathroom exhaust fans. Condensate drainage from heat pumps and air conditioners would be drained into the sanitary sewer system and would pass through the Hearst Monitoring Station before flowing into the City of Berkeley public sewer system and ultimately to the East Bay Municipal Utility District (EBMUD) regional wastewater treatment facility as described in Section IV.C.10. Sanitary sewer discharge would also be directed to the sanitary sewer system and monitoring performed at the Hearst Monitoring Station would ensure compliance with local and State regulations. HVAC, fume hoods, and bathroom exhaust fans would be vented to the outside at undetermined locations. Combustion air and flue exhaust vents for lab functions and heating and air conditioning units would be included on the exterior of the building roof as would two laboratory exhaust air stacks. A mechanical equipment roof screen would be located on the roof of the GPL.

III.B.5.d. GPL at Building 25/25B Site: Access, Circulation, and Parking
The GPL would meet Architectural Barriers Act (ABA) and Americans with Disabilities Act (ADA) requirements including the provision of required disabled parking stalls. A shuttle bus stop is currently located along McMillan Road to the north of the GPL site.

Employees, guests, and vendors at LBNL would be provided access to the new facility under the existing UC LBNL entrance policies and procedures. No changes to existing UC LBNL security and safeguards are anticipated.

LBNL has three secured entrances, one of which is staffed 24 hours a day, 365 days a year. The new GPL facility would be equipped with card key access controls.

Road access for emergency fire apparatus is required by the 2007 California Fire Code (California Code of Regulations, Title 24, Part 9). Emergency vehicles would access the GPL via a paved roadway on the east and south sides of the building, as shown in Figure III-4. The roadway would be redesigned from the current configuration to eliminate its sharp curve.

III.B.5.e. GPL at Building 25/25B Site: Landscaping and Tree Removal

The GPL facility would be landscaped in accordance with the following two design requirements from the LBNL 2006 LRDP:

- Continue to use sustainable practices in selection of plant materials and maintenance procedures;
- Utilize native, drought-tolerant plant materials to reduce water consumption; focus shade trees and ornamental plantings at special outdoor use areas.

Two trees to the southwest of Building 25 would probably be removed as part of the Proposed Action in order to realign the driveway. One is a 25-foot-high Coast live oak and the other a 30-foot Dawn redwood. A second Coast live oak on the east side of Building 25 might have to be removed to allow for the construction of a new 125-foot-long storm drain which would run from the southeast corner of the GPL east through the previously developed hillside to a connection point on Segre Road. The two Coast live oak trees have circumferences of 26 inches (tree southeast of B25) and 33 inches (tree southwest of B25) respectively. If the trees were removed, they would be replaced at a ratio of one to one, in keeping with UC LBNL policies.

III.B.5.f. GPL Operation at Building 25/25B Site

The GPL would be a safe, modern, energy efficient laboratory/office facility designed for multi-program use. The GPL would consist of approximately 60

percent office space and 40 percent wet chemistry lab facilities. The project scope meets all University and Federal requirements regarding energy conservation and sustainability.

The GPL is planned to house researchers from several LBNL Divisions, including Life Sciences, Physical Biosciences, and Materials Sciences. The building includes general laboratory space for functions such as wet lab, measurement lab, spectroscopic equipment, optics, instrumentation, tissue culture, and media prep; and general office space including facilities for computational theory staff related to the Solar Energy Research Center (SERC). The researchers would work in a variety of scientific areas including but not limited to structural biology, macromolecular crystallography, and cell biology. Their research activities would benefit technologies designed to improve the conversion of biomass to fuels, materials for energy applications such as photovoltaics, fuel cells and thermoelectric. Research activities would also contribute knowledge relevant to human disease and biotechnology.

The GPL would house normal general purpose laboratory equipment, typical of current laboratories located on-site and off-site. There would be up to six lasers embedded in other instruments such as microscopes, mass spectrometers, or flow cytometry analyzers/sorters; and probably an x-ray machine. All workers would be trained to the specification of the UC LBNL Health and Safety Manual (Pub-3000) prior to commencing work in the GPL. Standard laboratory chemicals including organic solvents would be used and stored in the labs. A suite of laboratory chemicals would be used, including very low level (typically 1 mCurie – 5 mCurie) radioactive substances. Such low level radioactive substances would be stored and used in very small amounts and under highly controlled conditions. Compressed gases would also be used.

III.B.5.g. GPL Decommissioning

It is anticipated that the GPL would be decommissioned at some as yet undetermined point in the future, after it has exceeded its useful lifetime. It is anticipated that such decommissioning would likely involve safely tying off

utility systems; removing and recycling or reusing its contents; and cleaning up and disposing of wastes and any potential sources of environmental contamination. Afterward, the building may or may not be demolished and removed pending a decision to be made at that time.

If the GPL were demolished, it is anticipated that there would be minimal environmental impacts. It is anticipated that there would be no hazardous or radioactive building waste material to dispose of, conventional demolition methods would be used, and controls would be required to protect the workers and the environment. Prior to demolition of the building, analysis would be conducted to verify whether environmental impacts would result from building demolition and to assess what level of further National Environmental Policy Act (NEPA) review would be appropriate.

III.B.6. Personnel and Equipment Relocations

III.B.6.a. Personnel

The GPL would provide space for a total of approximately 130 occupants, including UC LBNL life science researchers, personnel from the Physical Biosciences Division at the LBNL site, and approximately 30 graduate and post-graduate UC Berkeley researchers affiliated with the SERC program, some of whom currently work or travel regularly to the LBNL site. Relocation of these personnel to the GPL would consolidate related research programs and personnel and foster the collaborative approach to science and the free exchange of ideas which is vital to achieving DOE scientific mission objectives. The addition of approximately 30 UC Berkeley researchers represents an increase of less than 1 percent over the 2006 average daily population (ADP) of 3,650 personnel of the LBNL site. As such, this co-location of related programs and personnel would be achieved with only a negligible increase in the ADP of the LBNL site.[11]

[11] 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 2 Draft Environmental Impact Report (EIR) and circulated for public review between January 29 and March 15, 2010. In the earlier project description, approxi-

In addition to the relocations of the directly affected personnel (described above), it is expected that a number of secondary personnel moves (involving people already on the LBNL site) would likely result from the Proposed Action. Such personnel moves typically involve the transport of boxes and personal equipment (computers, phones, and files) from one work space to another by handcart and/or moving van. At times, they also involve minor renovations (partition and furniture adjustments, new carpeting, interior painting, etc.).

III.B.6.b. Equipment and Functions

The GPL would house newly created space specifically designed for receiving project related equipment and functions, transferred from other locations on the LBNL site and the UC Berkeley campus. Relocations would be necessary for equipment and functions currently housed in buildings to be demolished (Buildings 55 and 71C, 71D, 71F, and 71J, 71K, and 71P), as well as for any subsequently triggered moves. Such secondary relocations are expected to involve only office and laboratory functions.

In addition to some office equipment and laboratory supplies, the most notable equipment to be moved would be the PET (Positron Emission Tomography) scanners currently housed and operated in Building 55. These imaging devices are relatively large and sensitive and require special consideration in their placement and operation. At this time, it is anticipated that the Building 55 PET scanners would be relocated to Building 64, a nearby laboratory/office building that currently houses similar devices.

It is expected that no personnel, equipment, or functions would be moved off the site as a result of the Proposed Action. In addition, it is anticipated that

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mately 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. UC LBNL has since made planning decisions on future space needs that have modified the move plans associated with this proposed project.

all moves would involve the relocation of personnel, equipment, or functions into similarly used spaces. For example, office workers would move to other office space, and lab workers would move to other, appropriately outfitted laboratory space.

III.C. Alternatives to the Proposed Action

In accordance with the NEPA, Section 102 (2)(E), reasonable alternatives to the Proposed Action must be considered. These include a "No-Action Alternative," against which all other alternatives and their impacts are compared. The following alternatives to the Proposed Action are considered feasible and evaluated in this EA:

- Alternative A: GPL construction at Building 74 SE Parking Lot Site, demolition of the Buildings 25/25B, 55 and the six Building 71 trailers, and seismic strengthening of Building 85/85A;
- Alternative B: GPL construction at the Richmond Field Station (RFS), demolition of the Buildings 25/25B, 55 and the six Building 71 trailers, and seismic strengthening of Building 85/85A;
- Alternative C: No GPL Construction but Leased Space in Berkeley or Emeryville, demolition of the Buildings 25/25B, 55 and the six Building 71 trailers, and seismic strengthening of Building 85/85A;
- Alternative D: No demolition of buildings or trailers, no GPL construction, seismic strengthening of Building 85/85A.
- No-Action Alternative: No demolition, seismic strengthening of Building 85/85A, or GPL construction.

The alternatives would proceed no longer than the Proposed Action.

III.C.1. Alternative A (GPL Construction at Building 74 SE Parking Lot, B25/25B, 55, 71 Trailer Demolition, and B85/85A Seismic Strengthening)

Under this alternative, seismically deficient Buildings 25/25B, and 55, and Building 71 trailers C, D, F, J, K, and P would be demolished as under the Proposed Action. Seismic strengthening of Building 85/85A would also proceed as under the Proposed Action. This alternative differs from the Proposed Action in the on-site location proposed for construction of the GPL.

Under this on-site alternative, the new GPL would be constructed on the site of the existing Building 74 southeast parking lot at LBNL. A three-story GPL structure of approximately 43,000 gsf, and 29,500-square-foot footprint (including drive aisle) would be built. This would require development of approximately 8,000 square feet of previously developed area and approximately 20,000 square feet of undeveloped hillside adjacent to the building site (for a fire access lane), as well as the demolition of the shed, Building 74F, that currently occupies a corner of the parking lot. The site is located in close proximity to the UC Botanical Garden in the eastern section of the LBNL site, within Oakland City limits.

The GPL building would be terraced into the hillside, the northeastern face would be approximately 2½ stories and 25 to 30 feet in height. The average height of the building along its three-story southwest face would be 48 feet with an additional 11-foot wall on the top of the third story to screen mechanical equipment. On the roof, there would be two ventilation stacks, centrally located on the building, projecting an additional 30 feet above the roof. The building would require the construction of two permanent retaining walls along the eastern and western boundaries. The eastern boundary retaining wall would be approximately 450 feet long with a maximum height of about 25 feet from finished grade. The western wall would be approximately 300 feet long and a maximum of about 20 feet tall from finished grade.

III.C.1.a. GPL at Building 74 SE Lot: Site Preparation and Staging

Building 74F would be demolished and the asphalt parking lot would be removed. The hillside would be terraced to accommodate the proposed building.

Four areas have been identified for staging:

- Parking Lot U5 off Calvin Road to west of Building 74;
- Parking Lot U1 in front of and to southwest of Building 74;
- Parking Lot U3 to southeast of Building 74; and
- An area of ornamental shrubs to the west of the GPL site.

III.C.1.b. GPL at Building 74 SE lot: Excavation and Soil and Groundwater Sampling and Analysis

The Building 74 SE Parking Lot site is adjacent to a former plume of diesel-contaminated groundwater that originated from leaks in a diesel tank pipe around Building 74, but the plume has not reached the area that would be excavated for the GPL foundations according to the most recent monitoring reports. Excavation at this site would be to a maximum depth of 20 feet and would probably encounter groundwater. As required for all excavation at LBNL, a SMP and GMMP would be prepared and these would contain descriptions of the sampling and analysis required to evaluate potential risks and to comply with landfill screening criteria.

For GPL construction, approximately 7,000 cubic yards of cut would be required for the foundations. Of this, approximately 4,000 cubic yards would be used as backfill and approximately 3,000 cubic yards would be transported off-site. Sampling, removal, handling, and disposal would be done as described in detail in Section III.B.1.d.

III.C.1.c. GPL at Building 74 SE Lot: Utilities, HVAC, and Exhaust Systems

The GPL would require connections to existing utility lines serving Buildings 74 and 84 for potable water supply and sewer. These connections would occur within areas that have already been disturbed by existing building footprints, driveways, or roadways. Three new fire hydrants would be installed

around the exterior of the GPL. Concrete stormwater detention vaults are proposed to the north of the eastern side of the building.[12]

GPL interior building systems that would require exterior ventilation include heating and air conditioning units and bathroom exhaust fans. Combustion air and flue exhaust vents for lab functions and heating and air conditioning units would be included on the exterior of the building roof. The two ventilation stacks would project approximately 30 feet from the top of the roof. Condensate drainage from heat pumps and air conditioners would be drained into the sanitary sewer system and would pass through either the Hearst Monitoring Station or the Strawberry Monitoring Station before flowing into the City of Berkeley public sewer system and ultimately to the EBMUD regional wastewater treatment facility as described below in Section IV.C.10. Sanitary sewer discharge would also be directed to the sanitary sewer system and monitoring performed at the stations would ensure compliance with local and State regulations.

III.C.1.d. GPL at Building 74 SE Lot: Access, Circulation and Parking
The GPL would meet ABA and ADA requirements. A drop-off area and ADA parking would be located near the entrance of the GPL using existing parking spaces. At a minimum, disabled access would be provided through the main entrance on the west side of the building. Depending on final design, disabled access may be provided on other sides of the building as well.

Emergency vehicles would access the GPL from Centennial Drive via the existing driveway located along the southwestern face of Building 74. An emergency fire access road would be incorporated into the project area along the eastern portion of the site. The roadway would be about 20 feet wide and approximately 250 feet long.

[12] Conceptual Design Report, 2008. Seismic Life-Safety, Modernization, +Replacement of General Purpose Buildings, Phase II. RMW Architecture and Interiors for LBNL.

A stop for the UC LBNL shuttle service is located on Calvin Road at the entrance to the Building 74 parking lot, which would be approximately 250 feet from the entrance to the new facility. The construction of the GPL would result in the net loss of approximately 24 existing parking stalls, in addition to those converted to ADA spaces, in the Building 74 parking lot.

III.C.1.e. GPL at Building 74 SE Lot: Landscaping and Tree Removal

A landscaping plan to provide screening for the GPL when viewed from the UC Botanical Garden would be prepared as part of Alternative A, should the GPL be built at this location.

Site preparation is expected to involve removal of up to 46 trees; however, this number assumes a worst case scenario and might decrease based on the final grading plan and the proposed area of disturbance.[13] This includes 24 Coast live oak trees, eight Coast redwoods, and five Monterey pines. Any trees removed would be replaced at a ratio of one-to-one, in keeping with UC LBNL policies. The trees have been surveyed by an arborist and the project would follow recommended measures for pruning and protection of the remaining trees.

III.C.1.f. GPL Operation at Building 74 SE Lot

Under this alternative, the GPL would be a modern, safe, energy efficient laboratory/office facility designed for multi-program use. Operation of the facility would be equivalent to the GPL under the Proposed Action in all respects.

III.C.1.g. GPL Decommissioning

It is anticipated that the GPL would be decommissioned at some as yet undetermined point in the future, after it has exceeded its useful lifetime. Such decommissioning would likely involve safely tying off utility systems; removing and recycling or reusing its contents; and cleaning up and disposing of

[13] Arborist Report, 2008. Proposed New Building, LBNL. The Professional Tree Care Company.

wastes and any potential sources of environmental contamination. Afterward, the building may or may not be demolished and removed pending a decision to be made at that time.

III.C.2. Alternative B (GPL Construction at RFS, B25/25B, 55, 71 Trailer Demolition and B85/85A Seismic Strengthening)

Under this alternative, seismically unsound Buildings 25/25B, 55, and 71 trailers C, D, F, J, K, and P would be demolished as under the Proposed Action. Seismic strengthening of Building 85 would also proceed as under the Proposed Action. This alternative differs from the Proposed Action primarily in the location proposed for the GPL and in the construction of its foundation.

Under this alternative, the proposed GPL facility would be located at the UC Berkeley RFS. The RFS is located in Richmond off of Interstate 580 (I-580), approximately 6-miles northwest of the LBNL site. The 152-acre academic teaching and research facility consists of about 100 acres of uplands and about 52 acres of marsh and bay lands. The RFS was formerly used for industrial purposes and there is remnant contamination that has been the subject of environmental investigation and remediation over a number of years.[14] UC Berkeley is conducting additional investigations of groundwater and soil contamination to determine if more clean-up is required.

The proposed 3.2-acre GPL site at RFS would be bound by Seaver Avenue to the west, South 47th Street to the east, and two un-named streets to the north and south. Figure III-7 shows an aerial view of the RFS. This site is an existing storage area for California Partners for Advanced Transit and Highways research vehicles. Although a building (Building 167) is present on this site, this building would not be displaced by the GPL facility as adequate undeveloped land area is available to locate the GPL building on the site without

[14] A description of the Richmond Field Station including past industrial activities and ongoing clean-up can be found online at: http://rfs.berkeley.edu/about.html#thefacility.

FIGURE III-7

AERIAL VIEW OF THE RICHMOND FIELD STATION (RFS) SITE

removing this existing building. Under this alternative, the GPL would be a safe, modern, energy efficient laboratory/office facility designed for multi-program use. Operation of the facility would be equivalent to the GPL under the Proposed Action in all respects. If the GPL were to be constructed on this site, an SMP and GMMP would be prepared in accordance with UC LBNL standard operating procedures and the SPF. Sampling, removal, handling, and disposal would be done as described in detail in Section III.B.1.d.

Unlike the Proposed Action, which involves the relocation of about 30 UC Berkeley researchers to the LBNL site, this alternative would involve the relocation of 130 UC LBNL personnel to the RFS site. Because the RFS is not well-served by public transit, this alternative would include the creation of parking spaces for researchers, visitors, and guests, unlike the Proposed Action which would not result in the creation of additional parking spaces.

Similar to the Proposed Action, the RFS site is secured around all sides by chain link fencing that is at least 6 feet tall. Access to the site is monitored at a guard booth by the main entrance. Construction of the new facility at this site would require minimal grading since the site is flat.

III.C.3. Alternative C (No GPL Construction but Leased Space Off-Site, B25/25B, 55, 71 Trailer Demolition and B85/85A Seismic Strengthening)

Under this alternative, seismically deficient Buildings 25/25B, 55, and 71 antiquated trailers C, D, F, J, K, and P would be demolished as under the Proposed Action. Seismic strengthening of Building 85/85A would also proceed as under the Proposed Action. This alternative differs from the Proposed Action primarily in that no new GPL facility would be constructed. Instead, additional space would be leased in a facility in the City of Berkeley or Emeryville, and LBNL research personnel would be relocated.

III.C.4. Alternative D: Seismic Strengthening of Building 85/85A

Under Alternative D, the demolition and construction components of the Proposed Action would not occur. However, seismic strengthening of Build-

ing 85/85A would still take place at the same location and to the same specifications as under the Proposed Action. Building 25/25B, deemed seismically deficient under the UC Seismic Rating System, would remain unoccupied, but would not be demolished. In the short term, UC LBNL employees and guests would continue to occupy Building 55, also deemed seismically deficient under the UC rating system, and the six antiquated Building 71 trailers. In the long term, an alternative solution would be required as it is UC policy to replace or upgrade space deemed seismic deficient.

III.C.5. No-Action Alternative

Under the No-Action Alternative, none of the proposed demolition or GPL construction would occur. Building 25/25B would remain unoccupied, but would not be demolished. In the short term, UC LBNL employees and guests would continue to occupy Building 55, deemed seismically deficient under the UC Seismic rating system, the six antiquated Building 71 trailers. In the long term, an alternative solution would be required as it is UC policy to replace or upgrade space deemed seismically deficient. Under the No-Action Alternative the seismic strengthening of Building 85/85A would not occur.

III.D. Alternatives Considered But Eliminated

The Council on Environmental Quality (CEQ), established as part of NEPA, has published regulations that require agencies to rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives eliminated from detailed study, briefly explain the reasons for elimination. The Purpose and Need statement serves as the basis for identifying alternatives to the proposed action. Reasonable alternatives are those that substantially meet the agency's Purpose and Need. The following do not:

III.D.1. Rehabilitation Alternative

Under this alternative, Buildings 25/25B, 55, and 71 trailers C, D, F, J, K and P would not be demolished but would instead be rehabilitated to upgrade

overall function, improve seismic safety ratings, and mitigate risk to occupant safety. Specifically, this alternative would involve the partial demolition and reconstruction of Buildings 25/25B and 55 at their existing locations; the periodic replacement of the 71 trailers; and the seismic strengthening of Building 85/85A. However, productivity gains realized from co-location of the program elements would not be achieved. Moreover, Buildings 25/25B and 55 in particular are very old and have little remaining useful life. As described in the Statement of Mission Need on file with the DOE, the cost to rebuild these facilities would exceed the cost to build new facilities due to the extensive retrofit required. This alternative was determined to be unreasonable, and is not evaluated further.

III.D.2. Existing Buildings Alternative

Under this alternative, functions and programs housed in buildings identified for demolition would be relocated to existing, seismically stronger buildings at LBNL. Buildings would not be demolished, but would instead be left vacant. The new GPL facility would not be constructed under this alternative.

This alternative would not allow for the achievement of the identified Purpose and Need. Space at LBNL is currently 98 percent occupied and the functions to be relocated to a new GPL facility serve mission-critical needs. Failure to provide upgraded research facilities would continue occupancy of buildings with elevated life safety risks, and little useful life left. Moreover, failure to provide modern high accuracy research facilities suitable for coordinated research would seriously challenge scientists' ability to perform the high-level research necessary to successfully address the nationally and internationally critical issues posed by the current and emerging DOE missions. Additionally, the environmental benefits of a more energy efficient GPL building would not be realized, nor would the associated reduction in maintenance and operational costs. Consequently, this alternative was determined to be unreasonable and is not evaluated further.

III.D.3. Relocation of the HWHF

Relocation of the HWHF functions, currently in the Building 85/85A complex, to another location at LBNL was an alternative considered but rejected. HWHF operations could not be relocated to an existing building on site, as there is no space available at LBNL that would meet the requirements for this facility. Relocating the HWHF off-site would necessitate that UC LBNL operate multiple interim storage facilities around the LBNL site for storage of hazardous waste up to a maximum of 90 days before manifesting to a final destination.[15] This practice would not be possible, however, for mixed waste generated at LBNL. Currently, under an agreement with the Department of Toxic Substances Control (DTSC) entered pursuant to the Federal Facility Compliance Act of 1992, certain mixed waste streams are stored at LBNL for longer than the year limit normally allowed at permitted HWHF such as the HWHF in order to allow for characterizing the waste and locating appropriate mixed waste treatment and disposal facilities. This option is, therefore, unreasonable and was rejected.

III.E. Controls

This section describes the procedures which would be followed and the permits and approvals which would be obtained for the Proposed Action and alternatives.

III.E.1. UC LBNL Standard Operating Procedures

There are standard operating procedures to which the Proposed Action and alternatives would be subject. Specific reference to these procedures is made in Chapter IV and they are quoted where applicable. The procedures are generally intended to ensure the safety of contractors and visitors and staff at LBNL during construction projects, and to reduce the overall impact that

[15] As much as 55 gallons of waste may also be stored in a satellite accumulation area for no greater than one year before being shipped off-site.

construction/demolition actions have at LBNL and on the surrounding community.

III.E.2. Standard Project Features

Standard Project Features (SPFs) were originally identified in the UC LBNL 2006 LRDP EIR as environmentally proactive measures that would be incorporated into all LBNL projects.[16] These measures have been adopted as part of the LBNL 2006 LRDP EIR by the Regents of the University of California. These Standard Project Features are set forth in Appendix A. For clarity, Appendix A lists Standard Project Features as they were characterized in the LDRP EIR in Chapter 5, entitled *Mitigation Monitoring and Reporting Program*. The SPFs described herein are incorporated into and are a part of the project description of the Proposed Action and alternatives.

III.E.3. Plans Applicable to this Project

A variety of plans are applicable to cover the work carried out under the Proposed Action and alternatives. These are referenced in the issue sections in Chapter IV as appropriate, and are summarized here.

- *Soil Management Plan (SMP)* and *Groundwater Monitoring and Management Plan (GMMP)* must be prepared in accordance with the DTSC-administered CMI. A site-specific SMP is required by LBNL Capital Project Procedures Manual. This plan describes the requirements for soil and groundwater testing.
- *LBNL Radiological Work Permit Program*. The contractor must ensure that project construction complies with the LBNL Radiological Work Permit Program. At Buildings 25 and 55, where radiological materials have historically been used, whenever construction work exposes previously unexposed surfaces or opens up trenches, ventilation, plumbing, drains, or vacuum lines, the area must be surveyed by a Radiological Control Technician. Radiation testing would be conducted during re-

[16] LBNL, 2007. LBNL 2006 Long Range Development Plan Final Environmental Impact Report (SCH No. 2000102046).

moval of fume hoods, exhaust fans, ducting, vacuum systems, and flooring. Any contaminated material must be removed and disposed of prior to further demolition work.

- *Asbestos Compliance Work Plan, Lead Compliance Work Plan, and Silica Exposure Controls* must be implemented by the construction contractor to comply with relevant State and federal regulations preventing worker exposure to these materials. The OSHA regulations also include extensive, detailed requirements for worker protection applicable to any activity that could disturb lead- or asbestos-containing materials, including maintenance, renovation, and demolition. For lead, these requirements include respiratory protection, protective clothing, housekeeping, special high-efficiency filtered vacuums, hygiene facilities, medical surveillance, and training.
- *Site-Specific Injury and Illness Prevention Plan* including exposure prevention measures must be implemented by the construction contractor(s).
- *Site-Specific Storm Water Pollution Prevention Plan (SWPPP)* designed to specifically address potential discharges associated with construction must be prepared as the Proposed Action and alternatives would disturb more than 1-acre of land. A Notice of Intent must be submitted to the RWQCB to comply with the Construction General Permit requirements and conditions.
- *Communications Plan* to ensure that UC LBNL personnel and contractors are informed regarding hazards at the construction site would be developed by the Project Manager. Regular project site evaluations would be performed during project construction by a safety professional and project engineer to monitor the effectiveness of implemented measures.
- *Hazardous Materials Storage, Handling, Use, and Disposal Procedures* are maintained and overseen by LBNL EH&S Division. These procedures are compliant with State and federal regulations and designed to minimize health and safety risks to individuals such as those who would occupy the GPL on an ongoing basis.

- *Hazardous Materials Business Plan*, which identifies appropriate procedures for emergency training and response procedures to address the accidental release of hazardous materials, is maintained by UC LBNL. The plan is updated on a regular basis to account for changes in the types, locations, and volumes of hazardous materials used and stored on the Lab's site.
- *Self-Assessment Summary Report* and a *Site Environmental Report* are prepared by UC LBNL on an annual basis to aid in compliance with environmental laws and regulations governing hazardous materials, and worker safety, emergency response, and environmental protection.
- *LBNL EH&S Manual, Publication 3000* governs procedures for handling laboratory chemicals, including hazardous and radioactive chemicals, compressed gases and cryogenics, and operation of potentially dangerous machinery, as well as construction safety requirements. The LBNL EH&S Division maintains and oversees procedures for storage, handling, use, and disposal of hazardous materials. These procedures are compliant with State and federal regulations and designed to minimize health and safety risks to individuals such as those who would occupy the GPL on an ongoing basis.

III.E.4. Environmental Permits and Approvals

Several permits and approvals from regulatory agencies would be obtained for the project.

- LBNL is located on land owned by the University of California. The Board of Regents of the University of California (The Regents) is the University's decision-making body. The Regents have the authority to approve the project and to certify the EIR, however, the Proposed Action and alternatives are subject to and conditioned upon completion of the NEPA process. The Regents would approve the design of the GPL when the EIR is certified, subject to DOE completion of NEPA and approving the project as planned.

- State Water Resources Control Board (SWRCB), National Pollutant Discharge Elimination System (NPDES) California General Permit for Storm Water Discharges associated with Construction Site Discharges.
- Bay Area Air Quality Management District (BAAQMD) must be notified concerning asbestos demolition and possible asbestos renovation. However, no BAAQMD permit is required.
- The FTU at Building 25B is a permit by rule unit covered under the Tiered Permit Certified Unified Program Agency (CUPA) permit issued to LBNL by the City of Berkeley. Decommissioning of this unit would require approval of a decommissioning plan by the City of Berkeley Toxics Management Division.
- Alameda County Public Works Agency must issue a permit to close monitoring wells if the wells around Building 25/25B need to be decommissioned. The well decommissioning process, which involves overdrilling, removal of well casings and resurfacing with cement grout or sealant, would comply with California Well Standards.