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**M E M O**

Date: September 3, 2010  
To: Shabnam Barati, Impact Sciences  
From: Richard B. Rodkin, PE  
**SUBJECT: SERC Project Cumulative Construction Noise Analysis**

At your request, we have prepared a credible worst case construction noise analysis for the proposed SERC Project and adjacent projects in the Old Town Area at LBNL. The analysis focuses on nearest sensitive receivers located north and south of the project site at distances of 1600 to 1800 feet.

The City of Berkeley's Community Noise Ordinance sets limits for permissible noise levels during the day and night according to the zoning of the area. If ambient noise exceeds the standard, the ambient noise level becomes the allowable noise level.

For construction/demolition noise, with certain exceptions, the Noise Ordinance (Sec. 13.40.070 of the Municipal Code) prohibits operating tools and equipment used in these activities between 7:00 p.m. and 7:00 a.m. on weekdays and 8:00 p.m. and 9:00 a.m. on weekends or holidays such that the sound creates a noise disturbance across a residential or commercial real property line. The Noise Ordinance states that: "where technically and economically feasible," maximum weekday construction noise levels must be controlled so as not to exceed 75 dBA at the nearest properties for mobile equipment (defined as "nonscheduled, intermittent, short-term operation," or less than 10 days) and 60 dBA at the nearest properties for stationary equipment (defined as "repetitively scheduled and relatively long-term operation," or periods of 10 days or more), in R-1 and R-2 zoning districts. Residential areas to the north and south of the SERC site are zoned R-1 and R-2.

Using reference construction noise levels of 85 to 90 dBA Leq at 50 feet (same construction assumptions as those used in the CRT Refined Construction Noise Analysis - February 2010), and accounting for shielding by terrain and buildings, noise levels with the SERC project are calculated to range from 48 to 53 dBA Leq at a distances of 1,600 to 1800 feet.

Based on the proposed project construction schedule and the schedules for other projects anticipated in the near future, it is anticipated that other construction projects would be underway at approximately the same time as the proposed project. Old Town Demolition, which includes demolition of Building 25A is expected to run from mid 2010 to mid 2013. Construction of the General Purpose Laboratory (GPL) at the 25B site would probably start in late 2010. With the exception of these projects, which are in Old Town and in close proximity to the proposed SERC

site, the other projects would not cause a cumulative noise impact due to the relatively large distances between them. These two projects would be shielded by terrain in the northerly direction, reducing the construction noise received at the nearest residences to the north by about 5 dBA. Noise levels would be 3 dBA higher (51-56 dBA Leq) if two projects were occurring at the same time, and 5 dBA higher (53-58 dBA Leq) if all three were to occur at the same time and level of intensity. Residences to the south would have direct line of sight to construction at the GPL site. The credible worst case cumulative construction noise level at these residences would be 59-60 dBA Leq. This would only occur if maximum construction noise generation occurred at all three sites concurrently.

The LBNL 2006 LRDP EIR found that there could be a significant and unavoidable impact from construction noise from all the projects that would constitute buildout of the LRDP. The projects that would be of most concern would be mainly those near the LBNL fence that were repetitively scheduled and relatively long term operations, of 10 days or more. These projects in Old Town are not located near the LBNL fence. Overall, with incorporation of the LRDP mitigation measures into the project descriptions, the proposed project in combination with other projects that are planned to occur concurrently would cause a less-than-significant cumulative impact due to noise.

**Figure 1** Aerial Photo Showing Construction Sites and Nearest Residences

