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To Honorable Mayor and Members of the City Council

Subject: Lawrence Berkeley National Laboratory (LBNL) Notice of Preparation for Long Range Development Plan

RECOMMENDATION: that the City Council request that

1. As part of the 2004 Long Range Development (LRDP) Environmental Impact Report (EIR), LBNL review the potential environmental & health impacts of the sub fields of nanoscience in which research activities will be carried out at the LBNL site.
2. All nano-science and technology research projects at LBNL undergo an independent evaluation process to assess health and safety issues before being allowed to proceed. This evaluation process will be done by an independent Health and Safety Review Committee of knowledgeable experts and shall be approved by the City of Berkeley.  
LBNL agrees to provide the results of the initial startup health and safety and environmental reviews of all proposed nanoscience research projects including those to be conducted at the Molecular Foundry, and the annual health and safety reviews of all continuing research projects to the City and the public in a timely fashion.
4. LBNL agrees to help facilitate an independent biannual health and safety review of all of the nanoscience research carried out at LBNL. This would be conducted by the Health and Safety Review Committee (See#2).

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COUNCIL MEETING OF:

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OFFICE OF THE CITY CLERK  
CITY OF BERKELEY

From CEAC to contribute to the public record, to recommend to LBNL, and to recommend to City Council to direct City Manager to send a letter to LBNL, requesting that the LBNL include a comprehensive analysis of the following as part of the LBNL LRDP EIR current under preparation:

1. A comprehensive Watershed Management Plan
2. The need to protect and preserve open space such as by using infill developments.
3. Do not increase square footage of developed land per employee unless explicitly and publicly justified.
4. Plan fewer parking places per employee than is current practice with the encouragement of alternative transportation.
5. Cleanup of soils and groundwater should be to the highest possible standards, which allows for the most sensitive future land uses.

BACKGROUND

Lawrence Berkeley National Laboratory has been conducting research in nanoscience for over ten years and has extensive experience in assessing any associated hazards.

Extensive safety programs are in place to protect the health and safety of its staff, the public and the environment. New construction projects and facilities modifications are

reviewed for hazards and risks, and to ensure that appropriate Environmental Safety & Health (ES&H) features are integral to the planned project or facility. ES&H requirements identified through this process are incorporated into the project's design.

As part of the planning process, principal investigators, managers, and supervisors are required to consider what ES&H hazards, risks, and concerns are present, and to implement appropriate controls. Depending on the hazard, the principal investigator, supervisor, or manager must document the work and associated hazards, describe administrative and engineering controls, and document training or certification for the participants. The various processes ensure that experts with appropriate certifications or background are brought into the process for review or approval.

#### MOLECULAR FOUNDRY PROJECT

An assessment of hazards has been carried out in a Preliminary Safety Analysis Report (SAR):

1. Lead scientists were interviewed for each of the six research areas to determine the spectrum of hazards, materials, and equipment proposed for his/her Foundry research.
2. Preliminary information indicated that no radioactive materials or biohazards were planned to be used at the Molecular Foundry. Potential chemical inventories were obtained from the lead scientists and compared to standards with established threshold limits, including the California Building Code occupancy requirements, the San Francisco Bay Area Air Quality Management District, Threshold Quantities contained in the Clear Air Act, and OSHA regulations for Process Safety Management of Highly Hazardous Chemicals.

#### Building Safety Design Standards

1. All laboratories in the Molecular Foundry will meet the California Building code H-8 occupancy standards, which is a classification for "laboratories and similar areas used for scientific experimentation or research". Laboratories that meet these safety standards are certified to handle or store limited amounts of hazardous materials.

#### Existing LBNL Environment Safety & Health Reviews

1. All activities and projects are reviewed through various annual and tri-annual assessments, including the division self-assessment, EH&S inspections, the IFA, the SRC Management of Environment, Safety and Health (MESH) review.
2. DOE Berkeley Site Office conducts continuous reviews of the EH&S program and summarizes its findings in an annual report.
3. DOE Headquarters (both the Office of Independent Oversight and the Office of ES&H) conduct reviews of elements of LBNL's ES&H program.
4. UC President's Council, ES&H Panel conducts an annual on-site review. Their overall charter is to evaluate the EH&S systems in place

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at LBNL. Normally, two or three facilities or programs are selected at each on-site visit for a more in-depth evaluation of ISM (Integrated Safety Management) implementation. In the past, that has included the NTLF, ALS, the Hazardous Waste Handling Facility, and the new Genomics building. Results of the Panel's work are contained in public reports available from UCOP, Vice President of Lab Management. The Panel is staffed with faculty from UC and other Universities, professionals from various EH&S disciplines including Health Physics, Industrial Hygiene, Occupational Medicine, Safety Engineering, and Environmental Programs, and one attorney.

5. EH&S Peer Reviews are conducted once each three years (triennially) with the last one having been completed in early 2001. Peer reviews are typically staffed with EH&S Professionals from other Office of Science Laboratories, academia, and the private sector. EH&S Peer Reviews do not include other UC or DOE employees.

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Comments on Lawrence Berkeley National Laboratories 's  
LRDP environmental review:

1. The project is ill defined except in square footage and locations, and therefore it is impossible to adequately assess the environmental impacts.
2. The previous LBNL LRDP was exceeded in square footage and project/building development. The new environmental review should give an accounting of all the ways that the previous LRPD was exceeded.
3. The city is not obligated nor can it afford to provide LBNL with free infrastructure support. The city needs to be adequately compensated for previous development before LBNL chooses to add any further development. Cambridge University pays the City of Boston in lieu payments of \$20 million annually. The City of Berkeley deserves no less. The LBNL as well at the University of California must pay for pay its share of the infrastructure costs including sewers, storm drains, sidewalks and street construction and maintenance, street lighting, and landscaping maintenance. If the LBNL and the University of California had been adequately compensating the city in the past decade, the city would not have such a heavy back up of a billion dollars of deferred maintenance on sewers, storm drains, sidewalks and street construction. The

billions of dollars of deferred maintenance jeopardizes the future sustainability the residents and businesses currently paying taxes. The environmental review should look as fiscal impacts of current and proposed new development for city services, including compensation for police services.

4. LBNL and the University of California must not remove through either rental or purchase any more properties from the tax rolls in Berkeley, which will further diminish the city's ability to generate revenue to provide basic services.

5) The LB NL proposal to develop 800 parking spaces is not environmentally sustainable Any additional growth by LBNL should be accomplished without increasing employee parking.

6). Give detailed information about the projected increases in animal experimentation and animal experimentation facilities for all of LBNL past and present.

7. LBNL needs to look at alternatives to expansion in Berkeley. The alternatives presented in the initial EIR are not realistic. There is a failure to adequately provide for alternatives.

8) LBNL needs to provide more open space for the community in compensation for its intense development.

9. LBNL should follow the standard set by other governmental institutions by compensating the City of

Berkeley 10 percent of the cost of each project in addition to annual in lieu payments.

10. The LBNL currently contributes to significant traffic congestion on most of the major transportation arteries in the city of Berkeley. The university needs to reduce the automobile trips its employees and student generate before adding new development that will exceed the traffic capacity of the cities streets.

11. Expansion into Strawberry Canyon is an ecological disaster waiting to happen. This is on an earthquake fault in a high fire hazard area. Covering more of the soil will create run-off problems. This area is a riparian habitat area with oaks, creeks and the endangered whip snake. What will be the cumulative effect of all development in this area on wildlife habitat?

12. Lawrence Berkeley National Laboratories has failed to adequately consider the cumulative impacts of its development with UCB projected new development.

Endorse the comments of Janice Thomas, President of the Panoramic Neighborhood Association:

Janice Thomas  
37 Mosswood Road  
Berkeley, CA 94704

November 23, 2003

Jeff Philliber  
Environmental Planning Group Coordinator

Lawrence Berkeley National Laboratory  
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Re: Proposed scope of analysis for LBNL's 2004 LRDP EIR

Request increased specificity of the project location in the EIR analysis. The photographs that were displayed in the Scoping Session are a good start. But even so, no project location would be complete without providing actual measurements of aerial distance from the Laboratory boundaries to residential neighborhoods, student housing, intercollegiate athletic fields, the Strawberry Canyon Recreation Area, and the UC Botanical Gardens. This would be an improvement over the consistently vague and frequently misleading descriptions of project locations that have characterized past environmental review documents.

Request an estimate of the amount of light generated at night by the proposed and existing buildings. There might be impacts to wildlife and a reduced ability to star gaze depending on the amount of light that is generated.

The Berkeley Lab currently occupies 1,760,000 gsf in the Hill Area and that space demands will increase by up to 800,000 gsf. However, in terms of evaluating the impacts to the area, it would be helpful to know the percentage of the entire site that this figure represents. Asked another way, how much land remains undeveloped? And of this land, how much will provide suitable habitat for wildlife?

In a similar vein, what are the project goals for cleanup of soil and water? What percentage of the contamination will be cleaned and to what standard will the contaminated soil and groundwater be cleaned? These are basic and fundamental questions that need to be addressed in order to evaluate whether or not the LBNL is inappropriately building out in the perimeter of the site when in-fill development would be more appropriate.

The Hill Area Campus of the LBNL is prime real estate. The value of the real estate is not only the view, and the lush canyon environment, but also the proximity to the UC Berkeley Central Campus. The scope of the EIR analysis should include alternative locations for the research laboratories in order to preserve the Hill Area Campus for other uses and for which there

may be no viable substitutes. Since the Lab's research does not reportedly cause human disease and since it is not classified, there would appear to be no reason to remain in the Hill Area. It could be anywhere assuming real estate is available.

The scope of the EIR should therefore identify existing off-site locations, e.g. Emeryville, and systematically evaluate the costs and benefits of building new facilities in areas other than the Hill. Since student housing might be a better use of the land, the alternative site issue should be studied carefully. Otherwise it would appear that the Lawrence Berkeley National Laboratory operates at its current location for its view and out of tradition rather than rethinking the appropriateness of pursuing the Lab's mission at this location until the year 2025.

The LBNL is long overdue for developing a Watershed Management Plan. The Central Campus of UC Berkeley has had a Watershed Management Plan, but the Lab and UCB have failed to develop a plan for the headwaters. This is all the more troubling because of the Lab's hillside location, and the fundamental principle of water flowing downstream and seeking its lowest level. The tritium-contaminated groundwater, which was recently reported to the public by the Department of Toxic Substances Control, is an example of the Lab's historic failure in this regard. The faults and landslides combined with tritium-contaminated groundwater raise serious concerns that have not been heretofore addressed. The fact that the Lab's site is only 200 acres of the whole area and that UCB has joint custody, so to speak, is not an excuse. The Lab has arguably generated far more pollutants than UCB in the Hill Area and will undoubtedly continue to generate far more pollutants than UCB in the Hill Area and therefore should assume some leadership and moral authority in this regard. Please let this LRDP be the catalyst for doing so now.

Recreational impacts should be considered in this EIR. If the Lab is not conducting classified research and if there are no negative health impacts, then the Campus should be more available to the public for walking and hiking. This is especially true since UCB's fire trails are open to the public. The reasons for excluding the public from LBNL's fire trails should be provided.

Noise impacts were inadequately estimated in the Molecular Foundry Initial

Study. A sample of three different houses was used to generalize to the noise effects on all the houses on the Strawberry Canyon side of Panoramic Hill. The topography of the hill and the singular location of each home make generalizations faulty when based on just a few houses. The canyon acoustics do not allow noise to dissipate, and instead, the hillside catches the sound. As an example of this phenomenon, I can testify to hearing trains' whistles despite being miles away. In the LRDP, the canyon acoustics need to be factored into the noise analysis, and the methodology for predicting noise impacts needs to be valid. Data derived from flat terrain is useless as a predictor of noise impacts in the canyon.

The aesthetic impacts are of concern. As it is at present, the LBNL site is mostly out of site in Strawberry Canyon except from the perspective of Panoramic Hill residents. The verdant area of Strawberry Canyon is one of the characteristics of Berkeley and defines the Berkeley Hills compared to other hill towns. This area should be preserved for its distinctive aesthetic features that moreover have cultural significance and meaning not the least of which is Frederick Law Olmstead's vision to keep the canyon as open space. The canyon has significance as a cultural amenity that has not been adequately identified as such.

Yours sincerely,

Janice Thomas