

2.0 COMMENTS ON THE DRAFT EIR AND RESPONSES TO COMMENTS

2.1 INDEX TO COMMENTS

As described in **Section 1.0, Introduction**, all comments on the Draft Environmental Impact Report (EIR) received either in writing or orally at the public hearing have been coded, and the codes assigned to each comment are indicated on the written communication and the public hearing transcript that follow. All agencies, organizations, and individuals who commented on the Draft EIR are listed in **Table 2.0-1, Index to Comments**, below.

**Table 2.0-1
Index to Comments**

Commenter Code	Agency/Organization/Individual – Name
EBMUD	East Bay Municipal Utility District – William R. Kirkpatrick
CMTW	Committee to Minimize Toxic Waste – Pamela Sihvola
SSC	Save Strawberry Canyon – Leslie Emmington Jones
SCWC	Strawberry Creek Watershed Council – Carole Schemmerling
GB	Gene Bernardi
MM	Mark McDonald
BR	Barbara Robben
PH-1 through 7	Barbara Robben
PH-8 through 15	Stuart Jones
PH-16 through 21	Amy Merryday
PH-22 through 24	Leslie Emmington
PH-25 through 28	Pamela Sihvola
PH-29 through 33	Mary Mitchell
PH-34 through 36	Stuart Jones
PH-37 through 38	Mary Mitchell
PH-39	Pamela Sihvola

PH: Public Hearing

2.2 COMMENTS AND RESPONSES

Comment letters received during the public review period are reproduced below, together with a transcript of the public hearing held on September 23, 2010.

Five master responses have been prepared to allow for a more detailed response to issues of particular concern to the public. The master responses are included after the comment letters and the public hearing transcript. Responses to individual comments in letters or the public hearing transcript are presented after the master responses in **Table 2.0-2, Responses to Comments**. Responses in **Table 2.0-2** direct the reader to the master responses as appropriate.



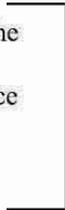
September 21, 2010

Jeff Philliber, Environmental Planner
Lawrence Berkeley National Laboratory
Environmental Planning Group
One Cyclotron Road, MS 79-234A
Berkeley, CA 94720

Re: Draft Environmental Impact Report – Solar Energy Research Center, Lawrence Berkeley National Laboratory

Dear Mr. Philliber:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Draft Environmental Impact Report (EIR) for the Solar Energy Research Center at the Lawrence Berkeley National Laboratory. EBMUD provided written comments on the Notice of Preparation of a Draft EIR for the project on June 4, 2010 and these comments (see enclosure) still apply regarding water service, water conservation, water recycling and wastewater planning.



1

If you have any questions concerning this response, please contact David J. Rehnstrom, Senior Civil Engineer, at (510) 287-1365.

Sincerely,

William R. Kirkpatrick
Manager of Water Distribution Planning Division

WRK:TRM:sb
sb10_196.doc

Enclosure



June 4, 2010

Jeff Philliber, Environmental Planner
Lawrence Berkeley National Laboratory
Environmental Planning Group
One Cyclotron Road, MS 76-234A
Berkeley, CA 94720

Re: Notice of Preparation of a Draft Environmental Impact Report – Solar
Energy Research Center, Lawrence Berkeley National Laboratory

Dear Mr. Philliber:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Solar Energy Research Center located at the Lawrence Berkeley National Laboratory (LBNL) in the Oakland-Berkeley Hills. EBMUD has the following comments.

WATER SERVICE

EBMUD's Shasta and Berkeley View Pressure Zones currently serve the existing LBNL facilities. If additional water service is needed, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine costs and conditions for providing additional water service to the existing parcels. Engineering and installation of water services requires substantial lead-time, which should be provided for in the project sponsor's development schedule.

The project sponsor should be aware that EBMUD will not inspect, install or maintain pipeline in contaminated soil or groundwater (if groundwater is present at any time during the year at the depth piping is to be installed) that must be handled as a hazardous waste or that may pose a health and safety risk to construction or maintenance personnel wearing Level D personal protective equipment. Nor will EBMUD install piping in areas where groundwater contaminant concentrations exceed specified limits for discharge to sanitary sewer systems or sewage treatment plants.

Applicants for EBMUD services requiring excavation in contaminated areas must submit copies of existing information regarding soil and groundwater quality within or adjacent to the project boundary. In addition, the applicant must provide a legally sufficient, complete and specific written remedial plan establishing the methodology, planning and design of all necessary systems for the removal, treatment, and disposal of all identified contaminated soil and/or groundwater. EBMUD will not design the installation of pipelines until such time as soil and groundwater quality data and remediation plans are

2

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Recycled Paper

received and reviewed and will not install pipelines until remediation has been carried out and documentation of the effectiveness of the remediation has been received and reviewed. If no soil or groundwater quality data exists or the information supplied by the applicant is insufficient EBMUD may require the applicant to perform sampling and analysis to characterize the soil being excavated and groundwater that may be encountered during excavation or perform such sampling and analysis itself at the applicant's expense.

2

WASTEWATER

EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to treat the proposed wastewater flows from this project, provided that the project and the wastewater generated by the project meet the requirements of the current EBMUD Wastewater Control Ordinance. However, wet weather flows are a concern. EBMUD has historically operated three Wet Weather Facilities to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP. On January 14, 2009, due to the Environmental Protection Agency's (EPA) and the State Water Resources Control Board's (SWRCB) re-interpretation of applicable law, the Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's Wet Weather Facilities. Additionally, on July 22, 2009 a Stipulated Order for Preliminary Relief issued by EPA, SWRCB, and RWQCB became effective. This order requires EBMUD to begin work that will identify problem infiltration/inflow areas, begin to reduce infiltration/inflow through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the Wet Weather Facilities.

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Currently, there is insufficient information to forecast how these changes will impact allowable wet weather flows in the individual collection system subbasins contributing to the EBMUD wastewater system, including the subbasin in which the proposed project is located. As required by the Stipulated Order, EBMUD is conducting extensive flow monitoring and hydraulic modeling to determine the level of flow reductions that will be needed in order to comply with the new zero-discharge requirement at the Wet Weather Facilities. It is reasonable to assume that a new regional wet weather flow allocation process may occur in the East Bay, but the schedule for implementation of any new flow allocations has not yet been determined. In the meantime, it would be prudent for the lead agency to require the project applicant to incorporate the following measures into the proposed project: (1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to reduce infiltration/inflow and (2) ensure any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent infiltration/inflow to the maximum extent feasible. Please include such provisions in the environmental documentation and other appropriate approvals for this project.

WATER RECYCLING

EBMUD's Policy 8.01 requires that customers use non-potable water for non-domestic purposes when it is of adequate quality and quantity, available at reasonable cost, not detrimental to public health and not injurious to plant life, fish and wildlife to offset demand on EBMUD's limited potable water supply. EBMUD requests that the EIR include an estimate of potential recycled water demand, and investigate the feasibility of recycled water for the project. EBMUD also requests the project team to coordinate and consult with EBMUD as appropriate for assistance with water recycling opportunities during project development.

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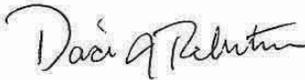
WATER CONSERVATION

The proposed project presents an opportunity to incorporate water conservation measures. EBMUD would request that LBNL include a requirement that the project comply with Assembly Bill 325, Model Water Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). The project sponsor should be aware that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsors' expense.

5

If you have any questions concerning this response, please contact David J. Rehnstrom, Senior Civil Engineer, at (510) 287-1365.

Sincerely,



For William R. Kirkpatrick
Manager of Water Distribution Planning Division

WRK:TRM:sb
sb10_108.doc

Committee to Minimize Toxic Waste

Jeff Philliber
Environmental Planner
Lawrence Berkeley National Laboratory
One Cyclotron Road, MS 76-234A
Berkeley, CA 94720

October 20, 2010

Re: Comments on the Draft EIR (Environmental Impact Report) for the Solar Energy Research Center (SERC) aka Helios East Construction and Operation Project at the Lawrence Berkeley National Laboratory (LBNL)

Dear Mr. Philliber,

The geographic location of the above referenced project, SERC, is virtually the same as the proposed General Purpose Laboratory (GPL) in LBNL's most contaminated site, the Old Town. We are therefore including our comments on the GPL (and Seismic Safety Phase 2) Draft EIR and Draft EA (Environmental Assessment) as comments on the SERC DEIR, since both projects share the same natural and man-made hazards, inflicting the site on which they are proposed to be built. So we ask that our GPL comments submitted herein be considered and responded to. (See Attachments 1 and 2)

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The DEIR is totally deficient and inadequate/incomplete in describing/analyzing the true impacts of the presence of the Old Town Groundwater Solvent/VOC Plume at the B 25A i.e. proposed SERC site. According to the DEIR some 13,000 cubic yards of soil will be excavated and hauled away involving some 2200 truck trips. Is it possible that most of the 13,000 cubic yards of soil will be contaminated with solvents and have to be disposed of as hazardous waste? Where will this waste be hauled to? What are the costs of dealing with this waste? After the excavation, will solvents still be present at the site? Will in-situ soil flushing continue? Where exactly, in reference to the SERC building? Will there be a pump-and-treat operation going on in the SERC basement? According to the DEIR the basement of the SERC building will be below the water table. What is being done to prevent contaminated, solvent laden water from entering the basement? Will there be sump-pumps operating as was the case with the Bevatron basement? How is the plinth being prevented from heaving, especially during heavy rain periods i.e. recurring EL Nino events? Heaving of building floors has been a recurring problem at LBNL, due to the site's unstable soil and the CALDERA's aguifers, areas of perched water - especially during heavy storms. Has LBNL's Site Restoration Program mapped the Old Town's hydrostratigraphic units (HSUs)? If not, why? Mapping of HSU's is critical to show the hydraulic connection between various permeable layers of the HSUs sedimentary sequences. Please show a cross-section of the various layers of soil and water at the Old Town/SERC site, and the predicted paths of the groundwater expansion, along faults etc. (See Attachments 3, 4 and 5)

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Furthermore, it is our understanding that, if for some reason all pump-and-treat operations stop, the contaminant levels would return to earlier, pre-treatment concentrations unless and until all soil contaminated with solvents has been removed. What is the plan to address the soil contamination in the Old Town? Please provide the plan as part of the Final EIR. Will soil contamination be cleaned up to residential standards, now that LBNL operates a hotel in the general OLD TOWN area. (See Attachment 6, "Book any Standard room for only \$ 129")

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We also ask that none of the existing monitoring wells be closed, since they are the only eyes to the groundwater. Due to the LBNL site's complex hydrogeology, many earthquake faults, contacts, areas of landslides, creeks etc. and due to the lack of clear understanding (and the will to understand) what the plume expansion routes are, it is critical that all monitoring wells stay open and that more are installed in the Old Town area. As long as there are solvents in the soil, they continue leaching into the groundwater, every time it rains!

6

Our report: Contaminant Plumes of the Lawrence Berkeley National Laboratory and Their Interrelation to Faults, Landslides, and Streams in Strawberry Canyon, Berkeley and Oakland, California, expresses these many concerns, and offers recommendations on page 50., which we ask that you respond to in the FEIR. (See Attachment 7.)

7

Landslides have created havoc at the LBNL site since the inception of the University of California Radiation Laboratory (UC Rad Lab) in the 1940s. A 1984 Chronology of the Campus Hill Area Development and Slope Instability shows how major slides started occurring immediately after and as a result of construction on the hill. (See Attachment 8.) The SERC site is a known landslide area (See Attachment 9.) and many earthquake faults intersect the site (See Attachment 10.). None of this received adequate analysis in the DEIR, and we ask that the site's geologic hazards be adequately addressed in the FEIR- especially since vibration-sensitive laboratories are proposed to be located at SERC!

8

The underlying reason for LBNL's chronic slope stability problems is the lab's location inside the collapsed caldera of an old volcano. Garniss H. Curtis, Professor Emeritus, Department of Earth and Planetary Science, UC Berkeley, has advised against any more construction in the caldera in his letter to the UC Office of the President (May 11, 2008), and we ask that you carefully consider his comments and respond to them in the FEIR. (See Attachment 11.)

9

There are other problems related to LBNL's location at the active Hayward Earthquake Fault Zone, which were not adequately addressed in the DEIR. For instance the DEIR states: "The natural gas supply is provided by the Defense Fuel Supply Center in Oregon and delivered by PG&E system. The point of delivery is a meter vault in the hillside above Cyclotron Road and below Building 88. A gas line distributes high pressure natural gas from PG&E's metering vault to the buildings throughout the LBNL hill site." In view of the recent catastrophic natural gas pipeline explosion in San Bruno, CA, we ask the following:

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Does the natural gas pipeline serving the proposed SERC site/area cross the Hayward Fault? If so, where?

What is the size, age and condition of this pipeline?

What is the size, age and condition of all the other pipelines at LBNL distributing high pressure natural gas from the PG&E metering vault?

When were these pipelines last inspected and/or repaired or replaced?

What was the condition of the pipelines when last inspected or serviced?

Do they all have automatic shut-off valves? If so, where?

Do the gas lines crossing the Hayward Fault have automatic shut-off valves on both sides of the fault? What are the pressures inside the gas pipelines?

The DEIR was extremely deficient regarding any substantial analysis and discussion of a worse-case scenario, following a natural gas pipeline explosion at the Hayward Fault, following a major earthquake, destroying the pipeline serving the SERC site and vicinity. In fact no analysis was provided regarding this VERY HIGH CONSEQUENCE AREA, so it must be included in the FEIR!

Are LBNL's natural gas pipelines located in the same utility trenches as water, electrical- and sewerlines? If so, a worse-case scenario of all pipes exploding, as was the case in San Bruno, must be fully analyzed, especially as to the availability of water to fight the ensuing fire- if all the water lines were to be destroyed! Building 88 and PG&E's natural gas metering vault are in the Alquist-Priolo Earthquake Fault Zone and the vault right on top of one of the traces of the Hayward Fault. (See Attachment 12.)

In view of the scenario above, LBNL's Emergency Response Plan is totally inadequate and relying on the local fire and police services is PURE FANTASY! After a major earthquake on the Hayward Fault, the whole city on fire, Berkeley fire and police will not come to LBNL, they will be protecting residential neighborhoods, thus LBNL must provide a realistic Emergency Response Plan, and barring such, all future construction on the hill must be stopped! LBNL has no adequate or realistic plan to fight wildland fires, either, thus a careful analysis of Hazards from Wildfires must be included in the FEIR as LBNL is located in a High Risk Wildland Fire Zone/Critical Fire Area/ California Fire Hazard Severity Zone and stores, uses, treats radioactive and hazardous wastes and materials in Strawberry Canyon, a notorious funnel for wildland fire winds!

In addition to the above, the DEIR failed to consider the impacts of Tectonic Creep in the Hayward Fault Zone, i.e. a continuous movement along the fault, which has caused cracking, leaky construction joints, holes in the floor of the culvert under UC's Memorial Stadium, offsets in the Claremont water tunnel, distortions of a warehouse in Fremont etc. (See Attachment 13.) Where are all the utility trenches located, serving SERC and LBNL, crossing the Hayward Fault? How are they protected? When are they inspected? UC maintenance personnel report recurrent trouble with utilities, such as bending or breaking of conduit near the Stadium. Please analyze tectonic creep impacts in the FEIR! Describe what precautions LBNL has implemented to protect residents along Highland Avenue, just below the PG&E's natural gas vault, in case of an explosion.

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In addition to all of the above, the most alarming, dangerous and controversial issue related to SERC is the ENGINEERING, MANUFACTURE AND USE OF NANOSCALE MATERIALS! Since the proposal and construction of the MOLECULAR FOUNDRY at LBNL, dedicated to NANOTECHNOLOGY, built without proper environmental review, NO EIR, NO EIS, in 2003, concerns have only escalated. In early 2004 protestors expressed concern at LBNL's gate during groundbreaking . (See Attachment 14.) ETC Group of Canada, dedicated to cultural and ecological diversity and human rights has called on governments to ADOPT A MORATORIUM ON SYNTHETIC NANOMATERIALS BEING PRODUCED IN LABORATORIES WITHOUT TESTING FOR HEALTH, SAFETY AND ENVIRONMENTAL IMPACTS! Dr. Vyvyan Howard, a pathology specialist, University of Liverpool, states that nanoparticles far smaller than human cells are easily ingested, inhaled, or absorbed through the skin (NY Times 4/14/2003). David Warheit, DuPont Haskell Laboratory, Newark, Delaware, found in animal experiments that 15% of the subjects died from suffocation because the nanotubes clumped in their lungs obstructed the bronchial tubes! (See Attachment 14 A.)

13

LBNL should heed the Precautionary Principle! The SERC DEIR failed to consider the proximity of SERC to the Lawrence Hall of Science, a childrens school and museum, less than 200 meters away and downwind!

Indeed, the children at LHS are the Maximally Exposed Individuals (MEI) and the impact of nanoparticles from SERC, and cumulative impacts of nanoparticles from the Molecular Foundry and other LBNL facilities, entering the childrens' lungs must be analyzed in a Safety Analysis Document (SAD), and attached to the FEIR!

The DEIR states that one pound of nano material is manufactured at LBNL's Molecular Foundry (MF) in one year, out of one type of nano-material research? What is the type? What is it used for? Who are the users of MF? [The DEIR further states that SERC will accommodate both US Department of Energy (DOE) and non-DOE research programs. Is SERC also a DOE User Facility? Who are the non-DOE users? The DEIR's disclosure of operations is inadequate. SERC would synthesize, manufacture and use engineered nano material. RISKS regarding the use and manufacture of DISPERSIBLE engineered nanomaterials were not addressed! The DEIR further states: "All nanoscale research is conducted in negative-pressure or isolation enclosure...", i.e. all nano waste/nanopollution will be vented out into the environment, into the Strawberry Creek watershed, into the air, to enter the lungs innocent bystanders, children at LHS, people working and visiting UC's Botanical Garden or walking, jogging, bicycling up and down Centennial Drive, just a few dozen feet from the MF's huge 4 towering stacks hiding 48 stacks connected to the individual laboratories. SERC will add another 28 stacks! (See Attachment 15.)

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In the manufacture of the one pound of nano material referenced above, how many ~~pounds~~ pounds were vented out into the atmosphere? How are nano waste emissions measured? There are no known filters to capture nano particle waste pollution! There are no Federal or State laws regulating nano research, it is morally reprehensible to continue such research until there are adequate human health and environmental protections in place! Please describe what would be the total surface area of one pound of nano material? How many million, billion, trillion square feet? This is critical information, since nano particles have a disproportionately large surface to volume ratio!

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19.

In addition to the SAD document, LBNL must prepare a Human Health and Ecological Risk Assessment for SERC, including cumulative impacts and risks from → all other LBNL nano research. List all facilities, buildings currently doing nano scale research. List all non-DOE users.

In 2006 the City of Berkeley's Municipal Code was changed to require facilities that manufacture or use manufactured nanoparticles to report/disclose "current toxicology of materials reported... and how the facility will safely handle, monitor, contain, dispose, track inventory, prevent releases, and mitigate such materials." Has LBNL complied with this Ordinance? How many reports have been provided to the City of Berkeley? Please, attach the last 3 to the FEIR!

18

Also attach the most recent critical studies regarding Human Health and Ecotoxicity Hazards and risks from the use of nano particles, and also provide most updated answers to the 12 Questions presented herein (See Attachment 16.)

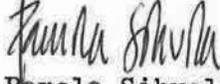
In conclusion, in view of all the hazards presented above, we ask that SERC, along with CRT be considered as anchor facilities for LBNL's second campus, in one of the many locations being considered from Fremont to Vallejo, to avoid continuing logistical, environmental, geotechnical constrains and legal challenges, currently crippling LBNL and its future! This is a prime opportunity for LBNL to offload facilities from the unstable Strawberry Creek watershed site, with its unconsolidated soils, water and mud of a collapsed caldera, riddled with landslides and earthquake faults. This is an opportunity to carefully guard scarce taxpayer funds and not waste them in continuing construction in an active earthquake fault zone! (See Attachment 17.)

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And lastly, since LBNL is owned and operated by DOE, and SERC operations are funded by DOE for DOE researchers, a NEPA (National Environmental Policy Act) review is required to analyze the impacts of this Federal Project! (See Attachment 18.)

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Sincerely,


Pamela Sihvola
CMTW
P.O. Box 9646
Berkeley, CA 94709

NOTE! In 1939 E. O. Lawrence got permission from the UC Regents to build in Strawberry Canyon, and wrote of his delight, saying that it gave privacy and sufficient distance to alleviate the possible ill effects of errant radiation upon the town below. It is critical for LBNL's administration to heed Lawrence's statement and find a new "Strawberry Canyon site" to alleviate the possible ill effects of errant nano particles upon the neighborhoods nearby! Alameda Naval Station at Alameda Point certainly meets all the qualifications! Put Helios plan back together and site both Helios East and West in Alameda! NOTE! NOTE! (See Attachment 19.)

21

The 2010 Nobel Prize in Physics was awarded to two scientists working at the University of Manchester in England with Scotch tape and pencil carbon flakes without any fancy nano prosciutto slicers! (See Attachment 20.)

23.

SAVE STRAWBERRY CANYON

P.O. BOX 1234
BERKELEY, CALIFORNIA 94701

WWW.SAVESTRAWBERRYCANYON.ORG

Save Strawberry Canyon is a citizens' group that seeks to preserve and protect the watershed lands and cultural landscape of Strawberry Canyon. Save Strawberry Canyon was formed out of the urgent need to take action in response to the threat of intrusive, inappropriate development on the Canyon lands.

Strawberry Canyon, opposite the Golden Gate, is a unique link to the East Bay Regional Park District lands and, by its streams and views, to San Francisco Bay. The Canyon itself with its streamside vegetation, oak-bay woodlands, grasslands, and surrounding slopes, is a rich repository of wildlife directly adjacent to the dense urban populations of the UC Berkeley Campus and the cities of Berkeley and Oakland.

Save Strawberry Canyon seeks to inform the public about the impacts of proposed developments, to encourage location of such developments to more suitable sites, and to promote better public access to the beautiful Canyon with its wildlife and scenic resources. Mission Statement

October 21, 2010

Jeff Philliber, Environmental Planner
Lawrence Berkeley National Laboratory (LBNL)
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jqphilliber@lbl.gov
hard copy to follow

Re: Draft Environmental Impact Report (DEIR) for Solar Energy Research Center (SERC) at Lawrence Berkeley National Laboratory (LBNL), Issues for Adequate Review and Federal Review in Compliance with National Environmental Policy Act (NEPA)

"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of an activity, rather than the public, should bear the burden of proof. The process of applying the precautionary principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action."

Wingspread Statement on the Precautionary Principle, January 1998

Dear Mr. Philliber:

This letter is being written to request further environmental review of the proposed SERC project vis-à-vis significant unaddressed impacts and to request immediate environmental review in compliance with NEPA. While the DEIR discusses many aspects of the project, important questions appear to be left unanswered. Save Strawberry Canyon (SSC) remains concerned regarding matters of environmental impacts such as site ground water, site geology, soils instability, seismic safety, public safety, and alternative project sites. SSC is also concerned that federal responsibility for the project is being sidestepped without legal merit.

SSC, a non-profit 501(c)3 organization with some 300 members, is dedicated to preserving and protecting the hills and valleys that define the cultural landscape surrounding Strawberry Canyon and its Strawberry Creek Watershed. SSC first formed upon learning of LBNL's 2006 Long Range Development Plan (LRDP) to build up to one million gross sq. ft. of new facilities for the Department of Energy (DOE) to implement its mission and programs in Blackberry and Strawberry Canyons. Since then, the ongoing discussions that have occurred within the context of environmental review for the various environmental impact studies (CRT, Helios, BELLA, and Seismic Safety II), each, have been illuminating. While SSC disputes the conclusions of the SERC EIR, minimizing the degradation to the natural landscape and the visual character of the sloping hillsides, SSC understands that a new community awareness and concern for the value of the area has grown, including concern for the landscape as both an impaired resource and as a geologically unstable site for further development.

The DEIR clearly attempts to exempt SERC from NEPA review. Such an exemption does not appear to be legitimate. The hundreds of millions of dollars of federal funds flowing into LBNL are driven by the federal contract between DOE and the University of California (UC) establishing a National Laboratory to find new sources of energy through science. DOE's Office of Science "Business

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Plan,” July 2010, specifies that LBNL “hosts” SERC as one of its two sustainable-energy research centers. Regardless of the fact that the land proposed for SERC is owned by UC and not intended to be leased to DOE, the operation of SERC’s scientific research is acclaimed to be a function of LBNL, in whole or in part. It is not plausible to claim that SERC is independent of LBNL’s infrastructure, network, operational oversight, and, thus, its duty to comply with NEPA.

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In light of the question of compliance with NEPA, the DEIR raises another question regarding the adequacy of the 2006 LBNL LRDP EIR from which SERC is tiered-off. Indeed, there are responsibilities of UC ownership and long-range programmatic development that mandate California Environmental Quality Act (CEQA) review. However, the research at LBNL’s 200 acres of hillside and canyon terrain is federally funded, driven by a national goal. It is entirely relevant that increasing concerns are mounting regarding the suitability of this location for further federal investment by the American Recovery and Investment Act (ARRA), or any other federal monies. Because of pressing questions regarding federal risk management and financial responsibility surrounding the LBNL site, it would seem prudent that a Site-wide Environmental Impact Statement (Site-wide EIS) be undertaken in accordance with NEPA. It is proforma for both Los Alamos and Livermore Labs, other UC National Laboratory sites, to undertake Site-wide EIS review. For reasons of equal concern, it would seem timely that a Site-wide EIS be undertaken to review programmatic development at LBNL.

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NEPA is specifically urgent at this time in regards to its provisions that provide for a process for federal decision-makers to weigh alternatives and to influence best-practice environmental outcomes. SSC urges the University, LBNL, and DOE to undertake such federal review, due not only to questions regarding SERC, but due also to questions of risk that may adversely impact LBNL’s long-range research program if fully developed on the unstable hillsides above the UC, having the potential to “...significantly affect the quality of the human environment.”

The DEIR revelation of unresolved questions regarding SERC’s nanomaterial research only raises more questions regarding long-term health issues for both the natural and human environments. In fact, there may be a tragic irony to the SERC quest to create and use nanoparticles to discover new sustainable-energy matter — such a quest may be the cause of uncontrollable destruction and effects to the air, water, plant life, animal life and the human population. Basically, the SERC DEIR claims that no one is responsible: “engineered nanomaterials...is an emerging field and at the present time, there are no federal or state regulations controlling engineered nanomaterials.” The DEIR therefore avoids the outstanding questions of nano risk in its “Impact Summary” and, furthermore, it fails to acknowledge the potential long-term cumulative risk of released nanoparticles from *other hillside LBNL facilities and programs*, including the Molecular Foundry, Advanced Light Source, National Center for Electron Microscopy, and connecting Energy Sciences Network. Adequate federal responsibility and discussion is sorely needed, *especially because* the Environmental Protection Agency (EPA) and other agencies are still in the pursuit of “gathering information” and setting regulatory standards.

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The potential for release and harm, or already released and harming, nanoparticles into the environment, unseen, unknown, or undetectable by an instrument yet-to-be-devised, is reminiscent of LBNL’s historic operations, beginning in the mid-century, when toxic and radioactive contamination of the watershed and soils were also considered to be of no consequence. The DEIR statement of fact that hazardous materials exist at the SERC site lacks any background explanation regarding the extent of the contamination (such as is identified at Livermore Lab). Without such information, the described *in-situ* remediation for SERC may or may not be sufficient i.e. there is no “red flag.” In fact, in light of the contaminated waters and soil, SSC has become concerned that proper National Pollutant Discharge Elimination System (NPDES) permits, Army Corps of Engineers (ACE) Section 404 permits, and Environmental Protection Agency (EPA) Total Maximum Daily Limit (TMDL) permits may not have been and/or are not being properly sought at LBNL.

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SSC continues to question with alarm the apparent blind eye with which LBNL views the geological threat to any development on its hillside campus. The SERC DEIR is yet another LBNL project that ignores, obscures, or minimizes the inherent risks of the unstable site, a contaminated site continuing to develop risky science. To determine in the “Executive Summary” that the immediately adjacent Hayward Fault, due for the “Big One,” and the multitude of fissures connected with the Wildcat Canyon Fault, are of “less than significant” impact defies a significant risk to the existence of LBNL’s facilities, its community, and the community below. Please take note of the following comments regarding geotechnical observations in the DEIR:

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- In the AKA memorandum of May 29, 2009, for the General Purpose Laboratory, summarizing results of a preliminary investigation and a previously-mapped paleolandslide beneath Building 25, the firm found geologic conditions consistent with a paleolandslide hypothesis, including sheared bedrock materials that it was permissible to interpret Orinda Formation beneath Lawrence Road as potentially part of the paleolandslide rather than “in-place” bedrock that slide-plane friction angle of slope stability was 15 degrees, a very low safety factor that to adjust the 15 degrees upward it would be necessary to do lab tests and that slope displacement in a seismic event might be 1.3 to 3.5 feet.

In order to investigate these, AKA proposed trenching. The April 8, 2010 report and its May 27 supplement appended general colored drawings of the single trench well (to the southwest of SERC) but no analysis. The supplement merely stated that no evidence of recent movement was found, leaving one to wonder if AKA had overlooked slickenside evidence of faulting or sheared bedrock, evidence of movement, or whether AKA chose to dig on a site believed to be outside of the slide area. The boring samples have Plasticity indices so high that a huge amount of material will have to be excavated.

7

- Now there is the SERC report and AKA has done NO trenching at all and only ONE boring! Older borings around 25A are useful to a point but not for moisture content. Moreover, AKA supplied no real analysis of the lot other than to suggest there are different materials underneath different parts of the site.
- AKA-1, under SERC, finds “bedrock,” that is siltstone and then claystone, at 10.5 feet. MW25A-98-6—under SERC--tuffaceous siltstone/ tuffaceous silty sandstone/sandy siltstone/ sandstone/ silty sandstone down to 25 feet. SB25A-96-3 (Preston Jordan)— just south of SERC—tuffaceous siltstone/ tuffaceous silty sandstone/ sandstone to 20 feet.

The latter two are part of slides or deposits of volcanic materials. These will move at a different rate from the “pure” siltstone in a seismic event.

- The Old Town area has suffered a number of landslides ever since the 1940s when the Cyclotron floor subsided. Almost every new grading for road or building resulted in a slide according to Dunn and Goodman’s inventory of 1984. And these landslides extend from the westernmost buildings to those in the east canyon. The worst were probably those of 1973, splitting Bldg. 46, taking out roads and utilities, undermining Centennial Drive, and threatening the Lawrence Hall of Science. But there were more to come. While more recent records were not made available, a recent map labels one huge landslide 41!

8

- Two maps from 1897, probably made by Lawson, show landslides over the whole hill before the Lab was built. These were not dirt scars but ravines and swellings that characterized the terrain and were clear evidence of slides. This evidence and more recent maps of paleolandslides have been waved away.

8

- LBNL has chosen to ignore its older consulting reports, which found “depositional” volcanics and vents from the old volcano. The caldera, however, has been traced from the north, 150 yards west of the Brazilian Room in Tilden Park on the Wildcat Fault, along Shasta, where outcrops have been used for walls, down to LBNL just inside the westernmost buildings and where Miocene in the caldera meets Cretaceous strata (erroneously called the “Chicken Creek Fault,” around the Botanical Garden and up Claremont Canyon to join the Wildcat Fault in a giant half circle. Here there are good outcrops of welded and semi-welded tuff, made from volcanic ash deposits (Communication, and tour, from Garniss Curtis). The largest vent is north of the lab, but some consultants have mentioned other vents. The volcano, erupting on the Wildcat Fault, was divided as the right-lateral fault carried part to Sibley Volcanic Preserve where its rhyolite constituents differentiate it from remains of other volcanoes in the preserve.

9

- The caldera accounts for the presence of “perched water tables,” large pockets where ash was replaced by water in the mud matrix. Borings and trenches find basalt, andesite, and other volcanics mixed with the mudstones made from the sedimentary rock that covered the volcano before its eruptions.

- Mudstones, that is claystone and siltstone, “give rise to many problems in civil engineering because they are weak and shrink or swell on being dried or wetted.” (*The Oxford Companion to the Earth*, Oxford, 2000, p. 714.) The consultants dub these “bedrock.”

10

To propose yet another building on these materials, all under the rubric of Seismic Safety, is delusional or hypocritical. Every building adds more weight to the ground pressing on the bowl of the caldera which in turn presses against the steep and unstable hill threatening the dorms and residential neighborhood below, so close to the Hayward Fault.

11

As for SERC, the geotechnical report, clearly done too fast and under pressure, is wholly inadequate. A trench running north-south as well as one between the GPL and SERC footprints should be made. More borings should be made and their Atterberg Limits recorded. While LBNL may cry at the expense of a delay and new reports, the Lab discounts the huge expense of building on this land rather than on a flat site, and appears to care nothing about the danger to life, instrumentation, buildings, and research. But giving up this site would be the most economical, conscientious, and seismically safe thing to do.

12

Geotechnical comments by Georgia S. Wright PhD

13

In light of the fact that there will be earth movement(s) in the future potentially causing unknown damage to the built environment, and in light of the fact that climate change may cause unknown periods of rainfall, it seems prudent to re-evaluate and question the danger, cumulatively, posed by continuing to build facilities on the LBNL hillsides that require high levels of electricity consumption and gas consumption. In particular, the SERC DEIR discloses that the PG&E delivery “metering vault” is located above Cyclotron Road from which point it distributes gas to all the buildings at LBNL. The area

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above Cyclotron Road is both unstable and highly subject to earth movement. Again, whether with regard to SERC or to all of LBNL's operations and facilities, a Site-wide EIS would seriously consider alternatives.

14

The discussion in the SERC DEIR on climate change is extensive. However, all the discussion and calculation defy the reality that tons and tons of dirt will be moved and countless trucks will produce gas emissions if SERC, CRT, Seismic Safety II, the Stadium project dirt removal, and the underground Stadium Garage go forward.

15

For reasons of environmental stewardship, financial wise-practice, and community health and good relationships, SSC urges that UC, LBNL, and DOE seek an alternative site for SERC.

16

Thank you for your attention.

Sincerely,

Lesley Emmington Jones, for
Save Strawberry Canyon

STRAWBERRY CREEK WATERSHED COUNCIL

Re: SERC project.

10/20/10

The Strawberry Creek Watershed is very dubious about your plan to place a new building on a site that is heavily contaminated with a wide variety of contaminants. Your "pump and treat" regimen for cleanup of VOCs and other toxics, is not reassuring. And we would very much like to know:

- 1. How much will the cleanup cost?
- 2. Who is paying for the cleanup?
- 3. Are you planning to use ARRA funds to clean this site?
- 4. Are the commercial Users contributing to the cost of the cleanup and the proposed building?
- 5. From whom you are expecting to get the required permits?

1

We also want to know how you intend to deal with the Nano contamination that this project would generate, if built. It would also be good to know if and how you deal with any of the Nano-contamination that is generated by your other facilities at LBNL. *

2

Finally, are you looking at the other sites for this building? If not why not? We would appreciate seeing an **independent** cost/benefit analysis that you should be having done for this and all your projects.

3

The Strawberry Creek Watershed Council wants to see a thorough environmental restoration of this site after the decontamination process is completed. Putting a new building there, is adding insult to injury to the very top of this very important, very abused, watershed.

4

Carole Schemmerling
861 Regal Rd
Berkeley, CA 94708
510.524-4005

*Attachment to follow with hard copy.

GENE C, BERNARDI
9 Arden Road
Berkeley, CA 94704

Oct 21, 2010

Jeff Philliber
UC-LBNL Environmental Planner.
One Cyclotron Rd. MS 76 -234A
Berkeley, CA 94720

Dear Mr. Philliber:

Just as the non-EI Red Molecular Foundry should not have been located in the Strawberry Canyon neither should the Solar Energy Research Center (SERC) be built there, since both involve nanotechnology research. This relatively new type of research has not existed long enough for proper testing that would determine the potential health and environmental impact.

It is already known that HEPA filters cannot screen out nanoparticles which are far smaller than human cells. Consequently they are easily ingested, inhaled and absorbed through the skin (N.Y Times 4-14-03). Every lab where nanotechnology is used has an individual stack vent to carry the nanoparticles away from the lab worker and deposit them in air-space shared by the Lawrence Hall of Science Children's Museum, the Botanical Gardens and nearby residents on Panoramic Hill and to the Northeast.

Will you gather together the 24 SERC stacks so it appears there are fewer stacks as you have with the Molecular Foundry where 48 stacks are bundled such that it appears there are only four stacks? There will be research done on oil and coal to make them more climate friendly; where is this research to be located?

Sincerely,

Gene Bernardi

1

From: Mark McDonald <cathmark@earthlink.net>
Date: October 20, 2010 7:01:38 PM PDT
To: Mark McDonald <cathmark@earthlink.net>
Subject: Comments re SERC project c/o Jeff Philliber

Mr Phillerber,

I am writing these comments to express my concerns about the proposed Solar Energy Research Construction & Research Project

SCH#2010052040. I personally support the concepts of power creation by solar, wind, wave, cogeneration & conservation to reverse the

carbon increases and greenhouse effects from them. I however believe that the potential risks from nano-scale materials and the proximity

of the proposed facility to the Lawrence Hall of Science (LHOS), the largest

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11/4/2010

children center in the East Bay to be incongruent with good

sense and unnecessarily risky to the health of the museum attendees. As a concerned parent I respectfully submit these comments and questions.

The LHOS already has the Molecular Foundry on one side and placing another facility that handles nano-materials 200 yards close on

yet another side demonstrates a scathing indifference to the safety and well being of the region's children who may be attending the

museum.

(1) If one is exposed to nano-materials what methods exist to remove them safely ?

(2) Are there different safety standards for exposures of nano-materials to children?

(3) What are the safe limits of nano-materials ?

(4) What are the long-lasting effects to nano-material exposure ?

(5) Can a person suffer a fatal event from absorption or exposure to nano-materials?

(6) What methods are available to protect museum visitors and local residents from escaped or released nano-materials ?

(7) Would you please describe how a release accidental or otherwise of nano-materials will be detected and alerted to the LHOS and the

local community ?

(8) How long does the concentration of nano-materials take to reduce once it has been absorbed by children and adult bodies?

(9) Would you please describe any radioactive materials and/or hazardous materials that will be employed at the proposed facility ?

(10) Are there any detectable tritium residuals in the LHOS from the adjacent closed NTIF?

(11) Would you please quantify the effects that the number of truck trips in the construction and operation of the SERC facility will add to

other construction projects at LBNL and U.C. Berkeley and assess the total wear to the already motley condition of the streets of

Berkeley?

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11/4/2010

(12) Could you please provide a comprehensive quantitative evaluation of the overall impacts from exhausts, road wear and accidents from

all the truck and vehicle activity at LBNL from normal operations and new construction and provide specific quantitative analysis of what

the SERC project will add to this activity.

5

(13) What compensation to the coffers of the City of Berkeley is the Department of Energy planning to contribute to pay for all the extreme

wear and tear to these already suffering roadways from normal operations and the rugged construction truck trips?

6

(14) Since LBNL and U.C. has repeatedly refused to address these road cost issues in the past please explain why a tax-paying Berkeley

citizen should be happy to continue paying for these costs?

7

(15) Are there currently regulations on how nano-materials are handled ? How are these being implemented?

(16) Are there any nano -materials or operations involving such that in the event of a accident that causes the release of said materials

that would require an evacuation of LHOS guests and personnel and local residents?

8

(17) What avenues or media in the local environment are capable of transporting nano-materials that may be accidentally released?

(18) What types of protective gear will workers at the SERC facility employ to protect themselves from inhalation or absorption of nano-

materials?

9

(19) Will any of these protective equipment be provided to the LHOS to safeguard visiting children guests, adults and personnel!?

11/4/2010

SOLAR ENERGY RESEARCH CENTER
Draft Environmental Impact Report of Sept. 2010

Comments prepared by:

Barbara Robben
1964 El Dorado
Berkeley, CA 94707
510-524-2383

21 October 2010

In general, I think that this Sept. 2010 version of LBNL’s Environmental Impact Report is an improvement over previous versions. The document itself is well done: nice paper and binding, easy to read type-face and spacing; attractive maps. I was not able to access Appendices 1.0 to 5.0 because of the format: it was on a disc. I would have liked especially to see section 1.0: Public Scoping Comments, but they were on the disc. I do thank you for sending me the bound report, as without it I would be unable to read it and comment. Please keep me on the list to receive the Final Environmental Impact Report and any other pertinent information regarding building projects at the Lab; on the Hill; Public Tours; and so forth.

To me, what most stands out at first is the Title of the report: Solar Energy Research Center. I have spent time commenting on the Computer Research and Theory building, the General Purpose Lab building, and Helios; perhaps even more projects-but the Solar Energy Research Center caught me off-guard. Referring to 2.0-6 I see that SERC is “not a part of the Helios Project.” However, I believe that at some time in the past, the two were connected in some manner. I would like to see a diagram of this, with a time-line, showing the original proposal, and its modifications over time, and the various locations that have been proposed, and any splits, or changes in authority.

1

I believe that the project presented in the Draft EIR – Solar Energy Research Center, is a much more acceptable project than the original Helios Project, which caused quite a negative stir in the populace. The fact that the present project is so different from the initial proposal shows that perhaps the citizens were correct, and the original Helios was very wrong-headed. These citizens are entitled to know what has happened along the way-to the initial project which they opposed. Ideally this would be included on the report cover, or at the very least, this information should be featured at the front of the report.

There is another diagram which I would like to see included in this report. It concerns the relationships between the University of California, the Lawrence Berkeley National Laboratory (perhaps also the Lawrence Livermore National Laboratory), the Department of Energy, the Regents of the University of California, and any other parties of significance. This was somewhat explained in section 1.0, but questions remain. If the

2

U.S. D. O. E. is involved, why is there only a State CEQA E.I.R and not a National NEPA requirement? Why are the U.C. Regents allowed to certify the E.I.R. report? Are they not connected to the same U.C. which is the 'lead agency' and which wants to build the facility? To me this seems like the outcome is predetermined, within a group of people with shared interests. Where is the independent oversight to watch for the interests of other affected parties?

2

My interest in the original Helios project, and also in the CRT and GPL projects, is in the general unsuitability of the hilly LBNL site, and this would also apply to the SERC projects. The site is steep, with slopes of up to 75% - and the ground is unstable. It is fractured and fissured in the bedrock, and has been subject to repeated landslides in the recent past. There is abundant groundwater present, some of which has had to be pumped out, so as to stabilize the buildings already built there. Add to this the fact that over the years since WWII, toxics of all kinds have been dumped, or have leached into the soil, and have continued leaching down into the groundwater. This is of concern to more than LBNL, as the groundwater is a shared resource. Add to this the fact that the LBNL waters, both the surface storm water and the natural springs, are possibly polluted with the chemicals, and tend to flow into Strawberry Creek-which traverses the U.C. Campus as well as the City of Berkeley on its way to the bay....and the ocean.

3

This can be broken into several components:

1. The unsuitability of building on the hillside for LBNL's sake alone.
2. The dangers of LBNL's building expansions to the surrounding neighbors and those downstream.
3. The increase in costs to shore up buildings in an unstable geologic area.
4. The need to clean up the soil and groundwater before even contemplating any additional building.

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5

Lets discuss the Hayward Fault. It traverses the base of the LBNL property and divides the Lab from the campus proper. See Fault Zone Map 4.3-1

A rupture of this fault, which is expected soon, would certainly trigger any landslides or other instabilities that were waiting in the wings. I would like to see an additional figure, which combines fig. 4.3-1 with fig. 4.6-1 (Existing Stormwater Drainage Near Project Site). See below.

See section 4.3-4: "Primary Seismic Hazards". It is said that "the project site is not expected to be subject to surface fault rupture." The meaning of this is that the ground will not be expected to open up a crack the size of which could swallow a cow. This is a valid expectation for the proposed SERC site...though it could be a concern for cows not far away at U.C.'s Memorial Stadium.

6

By superimposing fig. 4.3-1 onto fig. 4.6-1, one will notice however, that the Hayward Fault runs perpendicular to the blue and black lines on 4.6-1, which represent the surface and sub-surface drainage from the Lab on the way thru Berkeley to the Bay, or to treatment plants. The creeks will be off-set, and the underground pipes will be ruptured, in the event of a major earthquake on the Hayward Fault. Creek water may be creating

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new pathways to the sea (flooding), which sewage water will be released from underground culverts to gravity-flow through-out the city-a health hazard, to say the least.

7

Along with wastewater pipes, EBMUD pipes would also possibly shear...leaving LBNL with no water to put out the fires-which could be started when the gas lines to LBNL also shear (see sec. 4.9-3) This is how San Francisco largely was destroyed after the 1906 earthquake...more from the fires that started than from the earthquake itself. See section 4.5 for a listing of hazardous materials which may be raining down on neighbors as the ash settles:

Solvents	Carcinogens
Organic Compounds	Ethylene Oxide
Radio Active Materials	Lead
Nanoparticles	Asbestos etc
Chlorinated VOCs	PBCs
Radionuclide Tritium	

8

On a normal day-to-day basis, LBNL encourages the use of glove-boxes, fume hoods, HEPA filters (p.4.5-4) but no mention of what the entire East Bay and beyond should employ in case of wide-spread disaster involving a fire at LBNL.

Continuing on the subject of faults: p.4.0-6 mentions “the U.C. Seismic Safety Policy.” The University has no seismic safety policy at all except that what will further its own agenda! Please refer to Assembly Bioll 2133 which gives special exemption to the Alquist-Priolo Act (pages 4.3-7 and 4.3-8) for the California Memorial Stadium, which sits directly on top of the active Hayward Fault. AB 2133 was passed Sept. 24, 2010, at the instigation of U.C.

9

The statements made on 4.3-13, concerning Project Impacts, and labeled SERC Impact GEO-1 and GEO-2, claim that “the proposed project would not expose people to potentially substantial adverse effects, including the risk of loss, injury, or death, do to seismic ground-shaking.” And the impact is labeled Less than Significant. This is laughable-except of course when the seismic event unfolds, as it will, with tears-and ‘loss, injury and death’.

10

CUMULATIVE IMPACTS.

The list of projects presently being constructed, or demolished, is stagger: see Sec 4.0-4 and 5. there are 14 huge projects in the works at LBNL and another 16 projects on the nearby campus-with some of them intruding into the City of Berkeley itself. The impact is huge. Construction fences block the sidewalks, endangering pedestrians. Construction equipment is present everywhere. Enormous cranes punctuate the skyline. Yet predictably, in section 4.1.5 “Cumulative Impacts”, Cumulative Impact VIS-1 is labeled “Less than Significant”. Yet the impacts are very significant.

11

LBNL and U.C. construction projects are changing the character of Berkeley in major ways.

This might be a good place to remind all: the University of California does not need to pay taxes to the City for services rendered. Nor does the University need to obey local zoning laws. p. 4.8-13

11

And the citizens who are watching all these cumulative impacts unfold before our eyes, are the very ones who, thru our taxes, are paying for them.

Please refer to p. 4.8-2: Hearst Avenue. See p. 3.0-21

Hearst Avenue has been designated as the route for construction vehicles on the north side of the campus. Why couldn't U.C. construction traffic proceed thru the campus? According to the EIR draft, noise or dust should not be a problem...or, it would be mitigated. U.C. also has its own police force, so that officers could be stationed along the route, thus ensuring the safety pedestrians. If there is a problem implementing this idea, it raises the question of why U.C. would risk endangering Berkeley citizens in preference to its own community. Are the 2,170 truck trips attributable to SERC too much for the campus to bear, but acceptable to pass off onto the neighbors of the University? Please respond.

12

Also of note: Hearst Avenue has been used as a parking lot for U.C. construction workers for over a decade. One lane and the sidewalk have been fenced off, and a long line of what appears to be construction workers private vehicles are parked within this fenced off area. Would it be too much to ask for U.C. or LBNL as part of U.C. to eliminate this long term fence and restore the lane of traffic and the sidewalk to its proper use?

In addition, I have questions about the symbols on figure 3.0-7.

13

Symbols  are not included in the Explanation box. Are these wells or bore-holes? [At LBNL's sister site in Livermore, a CERCLA process 'Super-fund' site, there is regulatory oversight all the time. New problems come up, and there are unexpected costs. Yet since LBNL does not presently appear on the Super-fund list, is the oversight over toxic remediation of the groundwater being done? What role does DTSC perform?

14

Who, exactly, oversees the clean-up of extracted groundwater, and the "1000 pound granular activated carbon canister"? Please explain the 55-gallon GAC drum being used as a 'back-up'. To what standards is the groundwater clean-up being done? The 'drinking water standards' mentioned-is this secondary or tertiary standards and what oversight and testing is being done? The EIR mentions an infiltration bed, and yet in figure 3.0-7 there are several injection wells marked. Injection of treated water into the

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groundwater raises many questions and it must be addressed in detail in this report. Also the existence of monitoring wells must be addressed. Wells that pass from one water table to another are another source of possible contamination-especially considering the many already existing contaminants mentioned in the EIR. Please be specific about how abandoned monitoring wells would be closed, and about plans for new monitoring wells, and the oversight.

15

In conclusion, referring to section 5.0, the Alternatives, I think that Laboratory buildings constructed on the Hillside after WWII have all been built in the wrong place. It is understandable that faculty and staff would be attracted to a nearby location with excellent views and a star-studded history of prominent scientists. The site, however, is unsuitable, due primarily to its unstable geologic nature. Every building that is added to the hillside makes the matter worse and causes otherwise excellent scientists to wring their hands and wail about collaboration, consolidation, minimizing travel, integration of facilities, proximity to unique user facilities, partnership and so forth.

16

It is time, way past time actually, to understand that growth cannot be accommodated as desired on the Strawberry Canyon hillsides. Look for another site that will be suitable for the experiments and scientists of the future.

SERC_PublicHearing_9-23-10

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Public Scoping Meeting
Solar Energy Research Center Project
Lawrence Berkeley National Laboratory

North Berkeley Senior Center
September 23, 2010
6:30 p.m.

REPORTER'S TRANSCRIPT OF PROCEEDINGS
BY: JUDY LARRABEE, HEARING SHORTHAND REPORTER

CLARK REPORTING
2140 SHATTUCK AVENUE, SUITE 405
BERKELEY, CALIFORNIA 94704
(510) 486-0700

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1
2

APPEARANCES
Sam Chapman, Manager, State and Community

3 SERC_PublicHearing_9-23-10
4 Relations, LBNL
5 Michael Crommie, Professor of Physics, UC Berkeley
6 Sheree Swanson, Project Manager, LBNL
7 Jeff Philliber, Environmental Planner, LBNL

8 ---oOo---

9 MEMBERS OF THE PUBLIC
10 (in order of appearance)

- 11 1. Barbara Robben
12 2. Stuart Jones
13 3. Amy Merryday
14 4. Leslie Emmington
15 5. Pamela Sihvola
16 6. Mary Mitchell

17 Second round:

- 18 1. Leslie Emmington
19 2. Amy Merryday
20 3. Stuart Jones
21 4. Mary Mitchell

22 ---oOo---

23
24
25

3

1 PROCEEDINGS

2 MR. CHAPMAN: It's a few minutes after 7:00.
3 The announced start time was 7:00 o'clock. So I have
4 a few introductory remarks about what we'll be doing
5 tonight. And I'd like to make those remarks, and then
6 we'll go to the speakers, and then we will have public
7 testimony after that.

Page 2

8 My name is Sam Chapman. I want to welcome you to
9 this public meeting. It's focused on the Draft
10 Environmental Impact Report for the Solar Energy
11 Research Center prepared for the University of
12 California for this project.

13 For your general information, the bathrooms are
14 right outside the door. Materials for the meeting
15 include comment cards, speaker cards and the sign-in
16 sheet. If you haven't signed in, I would encourage
17 you to sign in so that we have a record of who came to
18 the meeting. And also, if you give us your address,
19 we'll be able to communicate with you in the future
20 about this project or other environmental projects.

21 If you would like to speak tonight, please fill
22 out a speaker card. Ross, who is sitting at the front
23 table, has the speaker cards and the comment cards.
24 The speaker cards are the small, blue cards, and the
25 comment cards are the larger cards.

4

1 You can also, after tonight, send your comments in
2 writing either through the mail, through the regular
3 mail, or you can e-mail them to planning@lbl.gov.
4 Please, in any of your comments, be sure to give us
5 your address so we can communicate with you.

6 The official comment period for this project ends
7 on October 21st. And Jeff Philliber, the Lab's
8 environmental planner, will be giving you more detail
9 on the environmental process later. But that's the
10 basic information.

11 We have a court reporter here tonight, Judy, who

12 is sitting at my far right, your far left. She will
13 be preparing a transcript of this meeting. That
14 transcript will appear on our web site when it's
15 completed. She may need to take a break, and if she
16 does, she will give me a signal and we'll take a brief
17 break while she rests, if she needs to.

18 This meeting is all about providing you with an
19 opportunity to comment on the Draft Environmental
20 Impact Report. You can ask questions, you can make
21 comments, and those questions and/or comments will go
22 into the public record.

23 Please give your full name for the record when you
24 speak if you're a speaker. I'm going to provide each
25 speaker with three minutes to speak, and I guarantee

5

1 you that we will get through all the people who are
2 here who wish to speak.

3 We have a timer to time your speaking, and
4 Armando, who is in our Community Relations department,
5 will be holding up a card that tells you you have one
6 minute left, you have 30 seconds left, and a red card
7 which says your time has elapsed.

8 Please come up to the microphone to make your
9 comments when your name is called. The microphone is
10 at your left on that side of the room. Please be
11 respectful of all the other speakers.

12 We will not be providing responses to questions or
13 comments tonight. The purpose of this meeting, as I
14 said, is to receive your questions and comments on the
15 Draft EIR and to include them in the public record,
16 and your questions and comments will be part of the

Page 4

17 record and will be responded to in the Final EIR.

18 A little additional information. If you'd like to
19 receive further notices of environmental reviews,
20 again, please fill out your information on the sign-in
21 sheet.

22 The environmental documents for this project are
23 available and will be available at the Lab's web site.
24 If you go to lbl.gov/community, you will see the
25 community relations web site and all the environmental

6

1 documents for this project and other projects you can
2 find there. They are also available at the Berkeley
3 Public Library, the central library, the second-floor
4 reference desk area.

5 So following my comments tonight, you'll hear from
6 three speakers. The first speaker is Dr. Michael
7 Crommie, who is a scientist who will tell us about the
8 science that will be going on inside this building.

9 The second one is Sheree Swanson, who is the
10 project manager, and she will talk about the project
11 itself.

12 And then the final speaker before the public
13 comments is Jeff Philliber, who is the Lab's
14 environmental planner, and he will tell you about the
15 environmental process for this project.

16 So I think that covers the general guidelines for
17 the evening. I'd like to get started with Professor
18 Michael Crommie, who will be our first speaker and
19 will tell us about the science that is planned to take
20 place inside of the Solar Energy Research Center.

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Thank you.
DR. CROMMIE: Thanks. So I wonder, can I talk
like this?
MS. SIHVOLA: No, use the mike.
DR. CROMMIE: Use the mike? All right. How

7

about like this? Can you guys hear me okay? Yeah?
Okay. Great.
So my name is Mike Crommie. I'm a professor in
the physics department at UC Berkeley. Also a faculty
senior scientist at LBL. And what I want to do right
now is give you a brief overview of the research
activities that are planned for the Solar Energy
Research Center building.
We often refer to this as SERC, so when I say
SERC, that's what I mean. And so I just wanted to say
that, in a nutshell, our planned activities are
focused on developing new techniques for performing
artificial photosynthesis.
what that is is we want to be able to create fuel,
and I mean fuel, the kind of fuel you'd stick in your
car or use to heat your homes. We want to create that
using sunlight, carbon dioxide and water.
And I want to point out that this project is part
of a much larger strategy that's being pursued by LBL
that we call Carbon Cycle 2.0 Initiative.
And this strategy is aimed at improving our
environment by reducing carbon in the atmosphere and
by reducing our dependence on fossil fuels.
The way we're doing that, we have a number of
projects that are focused on improving the energy

1 efficiency of buildings, improving solar panel
2 performance, improving batteries, biofuels, improving
3 how we capture carbon from the atmosphere, and also
4 developing new techniques for artificial
5 photosynthesis.

6 So what I'm going to tell you today about the SERC
7 building is just one part of this larger strategy. So
8 now let's focus on that. Basically, what we want to
9 do in the SERC building is we want to develop new ways
10 to mimic what plants do. And what plants do is
11 photosynthesis, and what plants do is they take
12 sunlight and carbon dioxide and water from the soil,
13 and they turn that into fuel.

14 But that's fuel for the plants. What we want to
15 do is the same thing, but we want to do the
16 photosynthesis using artificial devices that will
17 create fuel for us that we can use.

18 In order to do this, we want to build structures
19 using abundant nontoxic materials that will allow us
20 to take sunlight, carbon dioxide and water and use
21 that to create fuels such as hydrogen and ethanol.

22 Here, I show the kind of thing that we're trying
23 to develop. So this cartoon shows a sketch of the
24 kind of thing that we would like to create.

25 what you're seeing there is a membrane which has

1 embedded in it these microscopic rods, these little
2 structures. And when you shine light on this thing,

3 what we would like to happen is for chemical -- we
4 would like these rods to catalyze chemical reactions
5 that result in the transformation of water and carbon
6 dioxide into fuel molecules such as the methanol that
7 you see up there.

8 Now, in order to pursue that goal, we have
9 organized ourselves into different teams. Here, I
10 show an organization -- how we organize ourselves. We
11 have a number of research teams that are focused on
12 the development of the components or building blocks
13 that we will use to create these artificial
14 photosynthesis devices.

15 We also have a number of teams -- these are the
16 teams that we would like to work in this building.

17 We also have a number of teams that are focused on
18 integrating these components into functioning devices.
19 And then we have teams that are -- whose purpose is to
20 support these teams through the use of theoretical
21 techniques and different characterization techniques,
22 such as microscopy. That is what I do, I'm a
23 microscopist.

24 And I want to point out that the research that we
25 intend to do in this building --

10

1 AUDIENCE MEMBER: Can you tell us, what is a
2 microscopist?

3 DR. CROMMIE: Someone who looks at little
4 things using microscopes.

5 So this research that I'm describing is funded by
6 the U.S. Department of Energy and it is not classified
7 and it is not funded by BP.

Page 8

8 Here, I show a specific example of the kind of
9 research that we would like to do in this building.

10 Here, I'm showing one of the little elements that
11 would form a part of what -- these artificial
12 photosynthesis devices.

13 This is a sketch of a microscopic rod which, when
14 sunlight hits it, it causes charge to separate.
15 Negative charge goes to the small platinum particle,
16 which then catalyzes a reaction that causes hydrogen
17 to be produced, which is a fuel, which is something
18 that we want.

19 And so we would like to optimize and develop these
20 kinds of structures. And then we would like to
21 eventually integrate them into membrane-like
22 structures, and then we would like to take these
23 structures and scale them up to create larger, larger
24 devices that we could actually then use to create fuel
25 that would be useful for society.

11

1 Basically, we'd like to take these things and
2 stick them into buckets of water, shine light on them
3 and make fuel. If we could do that, then that would
4 help to improve our environment by reducing carbon in
5 the environment and also reduce our dependence on
6 fossil fuel. Thank you.

7 MR. CHAPMAN: Thank you.

8 MS. SWANSON: Good evening. My name is Sheree
9 Swanson. I really appreciate your interest in the
10 project. I appreciate you taking the time to listen
11 to our talk tonight.

12 I'm excited about the opportunity to be involved
13 with a project that will provide a facility for the
14 research that scientists like Mike are anticipating to
15 perform in the facility.

16 And so I'll be talking about the project, the
17 design and construction of the facility. Those
18 project objectives include providing an
19 energy-efficient, economical facility to house solar
20 energy research; to consolidate solar energy research
21 into or in close proximity to the unique use of
22 facilities at the Lawrence Berkeley National Lab; and
23 to locate that building so as to draw upon the
24 intellectual and technological as well as material
25 resources at the Lab.

12

1 And I think it's worth a few minutes to spend on
2 some relevant history, just to clarify what is and is
3 not involved, what is and is not included in the Solar
4 Energy Research Center project.

5 The University of California, in 2007 and 2008,
6 proposed the Helios Energy Research Facility, which
7 was proposed at the perimeter of the laboratory in
8 Strawberry Canyon. It would house both solar energy
9 research as well as bioscience work.

10 There was significant community concern regarding
11 the construction of that project, and in 2009, the
12 University listened. They chose to split those
13 programs into two separate facilities, one which is
14 under construction currently in downtown Berkeley on
15 Hearst, and that's to house the bioscience research.

16 And the solar energy research, that facility is
Page 10

17 what will be housed in the facility that we're
18 planning and going through the CEQA process now.

19 And, of course, in 2010, we started the --
20 restarted the CEQA environmental impact review process
21 for the facility that's specifically solar energy
22 research.

23 So what are we talking about? We are talking
24 about designing and constructing a three-story
25 facility, approximately 40,000 square feet, located in

13

1 the Old Town area of Lawrence Berkeley Lab, adjacent
2 to the proposed general all-purpose lab on the current
3 location of Building 25A, 44, 44A, and 44B.

4 This will show you a map of the laboratory. The
5 dark green area is the laboratory perimeter. The Old
6 Town -- and this is the advanced light source
7 landmark. The Old Town area is this region in the
8 center of the lab.

9 And our proposed site is right there. If we zoom
10 down on that map, this is Building 25A, and the 44s
11 are in here. And this footprint, highlighted by the
12 yellow boundaries, is basically the general
13 configuration of the building.

14 And this is what the future layout would look
15 like. And I would like to note that this is a -- I
16 mentioned a three-story facility.

17 The first floor is -- and it's a total of 40,000
18 square feet, but the first floor is a basement that
19 daylights to the west, so this is the west, to the
20 water.

21 And the second and third floor are much --
22 significantly smaller, about eight to 9,000 square
23 feet. So this is the footprint of the second and
24 third floor. And I'll show you some more views later
25 on. But basically, the basement is here and it's

14

1 showing the green roof and a courtyard, a finished
2 courtyard.

3 The building will be designed clearly with a focus
4 on Green Building practices, very commensurate and
5 consistent with the future research that we anticipate
6 that will go on in the facility. Our goal is to have
7 a certified Gold LEED building, and also to beat the
8 standard -- history standard requirements for energy
9 efficiency by a minimum of 30 percent.

10 We're also planning on planting new habitat and
11 will control -- there will be a focus on controlling
12 any exterior light glare, and the green roof will aid
13 and integrate the facility to the adjacent hillside.

14 Again, on Green Building construction and
15 sustainability and -- a efficient design facility will
16 utilize -- is proposed to utilize environmentally
17 intelligent materials, recycled and renewable sources
18 to the maximum extent possible.

19 The facility is proposed to be orientated to
20 maximize the use of natural light. We also plan on
21 utilizing solar panels for domestic hot water.

22 So we're excited about the efficiency and
23 potential sustainability of the facility. The
24 integration of the building is a major consideration
25 of the design, and that the -- how it interfaces with

Page 12

1 the adjacent facilities, the general purpose lab and
2 the advanced light source lab, is given consideration
3 in design.

4 The next two slides give you some graphics and
5 give you a better idea of the current design. So I
6 mentioned that we have the basement that daylights to
7 the west. The west is this way. This basement
8 daylights will have basically a service entry here,
9 and the basement will house a vibration and
10 light-sensitive science.

11 The second floor is proposed as a transparent
12 office area, and the third floor would house
13 laboratories.

14 This view is from the south looking north, looking
15 northwest.

16 AUDIENCE MEMBER: Can you tell us how tall
17 that is?

18 MS. SWANSON: No, we're not answering. I
19 appreciate the interest, but if you'll submit the
20 question, and then we'll respond with the answers. I
21 want to make sure I give you the exact heights.

22 MR. CHAPMAN: We can't take questions from the
23 audience because, for one thing, the court reporter is
24 having a hard time hearing. When you speak, if you
25 have a question, you're welcome to ask questions when

16

1 you speak.

2 MS. SWANSON: This is a view of the Solar

3 Energy Research Center, and here is the general
4 purpose laboratory in the background.

5 Our preliminary schedule is going to propose the
6 environmental impact report for certification to the
7 Regents meeting in January of 2011, and we propose
8 construction start of summer of 2011 and completion --
9 basically, a two-year construction period with
10 completion in mid 2013.

11 And with that, I'll turn it over to Jeff.

12 MR. PHILLIBER: Thanks, Sheree.

13 Hi, everyone. I'm Jeff Philliber. I'm the Lab's
14 environmental planner. I'm here tonight to talk about
15 the purpose of this meeting, which is, pursuant to
16 CEQA, to hold a public hearing on the Draft
17 Environmental Impact Report on the SERC project.

18 The content of this meeting is for us to provide
19 some basic information about the project and the Draft
20 EIR, which is out currently, and to explain the CEQA
21 process.

22 And we try to do this briefly because the real
23 intent of the meeting is for you to come up and to
24 voice your concerns, questions, comments about the
25 merits of the analysis of the Draft Environmental

17

1 Impact Report.

2 In particular, we'll also certainly record your
3 comments about the project and to record those, with
4 the assistance of our court reporter, and then to
5 address those in writing in the Final Environmental
6 Impact Report.

7 As you've already experienced, this is not a
Page 14

8 dialogue or an opportunity for questions and answers.
9 And let me just say a word about that.

10 We are frustrated as well, as I'm sure you are,
11 when we can't answer some simple questions like that.
12 We fall back on the intent and requirement of this
13 meeting, which is, again, for us to passively listen.

14 And that's because it is very hard to know when to
15 stop taking questions and say, well, that is a
16 reasonable question, but then the next question is
17 something that is difficult to answer.

18 For example, the height of the building is in the
19 Environmental Impact Report itself, so you could find
20 it there. Or you could stop Sheree after the meeting.
21 I'm sure she'll be happy to tell you.

22 But, in any event, we're not trying to be meanies,
23 but we have found that it suits everyone's purposes
24 better if we hold to the purpose, the CEQA purposes in
25 the meeting.

18

1 what we do with your comments is to hopefully
2 refine the EIR, make it a better environmental impact
3 analysis so that when the Final EIR is completed, it
4 will reflect any concerns or comments. Or if you find
5 any weaknesses in it, we will be able to consider
6 those as we refine the draft and turn it into a final.

7 The decision makers, the Regents, will then be
8 cognizant of your concerns.

9 There are, as I mentioned, there are other avenues
10 for questions. Of course, you can write your
11 questions down. You can contact Community Relations

12 at the Lab. There's a number of other ways to get
13 basic project information. Of course, you can look at
14 the Draft EIR as well.

15 The CEQA process -- and I probably don't need to
16 go into this too long because most of you are very
17 savvy about this process. I'll just go through it.

18 It starts with the scoping period, and scoping
19 period is an opportunity for us to present to you what
20 the basic project concept is and what our analysis
21 will be looking at.

22 We send out a notice of preparation, we take
23 comments for 30 days, we hold scoping meetings as per
24 our University policy. Many of you attended that
25 meeting and provided us with your input.

19

1 We take your comments from the scoping period and
2 use those to inform us as we prepare the Draft
3 Environmental Impact Report, which is what we're
4 dealing with tonight.

5 We will further take your comments on the Draft
6 EIR and use those again to refine the Final EIR. That
7 will be made publicly available prior to its being
8 looked at by the Regents.

9 And finally, the Regents will consider it at a
10 Regents meeting and make the decision on whether or
11 not to certify the Final EIR. The certification is
12 basically their approval process.

13 The schedule for the CEQA process is as follows:
14 In early summer, we held a scoping process. We are
15 currently, from September 7th through October 21st,
16 holding a public comment period on the Draft EIR.

Page 16

17 The Final EIR should be made available sometime in
18 December. We'll certainly try to not make that
19 coincide with the Christmas holiday and New Year's
20 holiday and that period in between. But our target is
21 the Regents meeting in January of 2011.

22 The issues that are evaluated in the EIR analysis
23 are the same ones that were identified in the scoping
24 process. You can see what they are here.

25 Of course, as required by CEQA, we also looked at

20

1 alternatives and cumulative impacts. What is found in
2 the analysis is that there are no significant
3 unavoidable project-specific impacts from the project.

4 As far as cumulative impacts, which are impacts of
5 the project in addition to impacts from all the other
6 projects that may be taking place in the same time
7 frame, the same geographic area, there are no
8 significant cumulative impacts, save one, which is the
9 area of traffic. And I can just take a moment to
10 explain what that means.

11 The traffic analysis, as you'll see in the EIR,
12 shows that during the peak commute hour, the project
13 is likely to contribute something on the order of
14 about eight or nine cars, which means there would be
15 about one car every seven or eight minutes or so going
16 through an intersection that might be a heavily
17 congested intersection. In Berkeley, there's about
18 four of them of concern.

19 Now, those cars -- that one car wouldn't be
20 noticeable to just about anybody. And therefore, it's

21 not really a project-specific impact. But when you
22 add that one car to hypothetical other cars from other
23 projects, they could add up to be interpreted to be
24 cumulatively significant. They are considered to be
25 unavoidable, not because the Lab is not willing to

21

1 make some improvements on those intersections, but
2 because it's beyond the power of the Lab and the
3 University to make those improvements without getting
4 decisions from the City of Berkeley and UC Berkeley.

5 And therefore, it's more of a technicality than
6 anything else, but it's considered significant and
7 unavoidable. And so as you read that section, that's
8 the thing to keep in mind, what that's explaining.

9 As you can see, I did put on the visual
10 simulation. You can see that from Strawberry Canyon,
11 which I think is probably the most sensitive area as
12 far as impacts go, this project would really not be
13 noticeable.

14 Here, a sort of before picture, and you can see it
15 after -- you can just barely see -- you can see it in
16 your Draft EIR better, but it's virtually not
17 noticeable from off site, from this angle.

18 And I just wanted to, as the closing slide, I just
19 wanted to reflect also on something that Sheree had
20 brought up.

21 Initially, the precursor to this project was a
22 different project. It was a Helios project. It was
23 initially proposed for this area down here; this
24 being, of course, the heart of Strawberry Canyon.

25 This, of course, is -- these are some developed as
Page 18

1 well as undeveloped areas. There were some
2 environmental sensitivities there.

3 And through the CEQA process, the University heard
4 loud and clear that this was a really sensitive area
5 to a lot of folks and this was really something a lot
6 of people opposed.

7 And so, again, largely in part due to the CEQA
8 process, your participation and the University
9 listening, this project was, as Sheree says, is
10 divided amongst its sort of natural dividing line
11 which are the separate components that we're going to
12 be housing in a building or be coupled.

13 And as you can see, a site that's -- from an
14 environmental standpoint, is highly superior, was
15 selected. This is all developed; this is all paved.
16 There are a couple of landscape trees up there.

17 But otherwise, it's in the heart of the Lab; it's
18 in Old Town. It's an area that's not noticeable from
19 off site, pretty much, at least from downhill.

20 And so, again, I just want to say that, to
21 reinforce why you're here at this meeting tonight and
22 why you participate in this process is this process
23 and your participation do make a difference, and
24 hopefully we can all make this a much better project.

25 So with that, I'll just move on to the last slide,

23

1 if you want to comment on this project -- again,
2 questions, comments, concerns, anything of that

3 nature, you can do it in a number of ways. You can
4 send a letter to me at Berkeley Lab. You'll find the
5 address all over the place. It's also in the notice
6 of availability. You can send an e-mail to
7 planning@lbl.gov, as Sam mentioned earlier.

8 You can fill out a comment card at this meeting
9 and turn it in or mail it to us. Or you can make your
10 comments orally at this meeting, and we'll record
11 those with the help of our court reporter.

12 Any of those four ways, you will find your
13 comments will be printed in the Final Environmental
14 Impact Report and they will be specifically addressed
15 with some sort of response.

16 So with that, we're going to turn it back to Sam
17 and then you guys -- we'll be able to listen to your
18 comments. Thank you.

19 MR. CHAPMAN: Thanks, Jeff.

20 Can you turn the lights up.

21 So, as I indicated earlier, we will hear from
22 speakers who have filled out speaker cards. So far, I
23 only have two speaker cards. So if you want to speak,
24 Ross will take your cards.

25 The first two speakers will be -- and I'll give

24

1 you the next speaker and then the person who follows
2 so that you can be prepared to follow the speaker who
3 is currently speaking.

4 So the first speaker will be Barbara Robben and
5 the second speaker will be Stuart Jones. Please use
6 the microphone to your left. So you'll have three
7 minutes to speak, and Armando will show you a card

Page 20

8 when you have one minute left and when you have 30
9 seconds and when your time has expired.

10 MS. ROBBEN: My name is Barbara Robben. And
11 first of all, I want to thank you for sending me a
12 copy of this stuff because in my case it's necessary.

13 Is this on?

14 MR. CHAPMAN: Yes.

15 MS. ROBBEN: I'm a little bit confused because
16 I've known this project, I think, as the Helios
17 Project. And you were explaining here, but I think
18 the general public, if they weren't in attendance,
19 certainly would be confused because we had a bigger
20 crowd for the Helios, when it was called that.

21 And then you called it Helios East and Helios West
22 and now Solar Energy Research Center. I'm not sure
23 that everybody followed the track of where the project
24 has gone.

25 And I have commented upon these projects,

25

1 particularly this one, but also the other projects,
2 and it basically comes down to the fact that it's an
3 unsuitable location to have all these buildings. It's
4 geologically unstable and it's steep and a bad use of
5 that canyon itself.

6 I think that you should, when you're talking about
7 building in the Old Town, I've always thought that you
8 should try, when you have to demolish anything, you
9 should try to move your project off the hill and stick
10 with that.

11 You're talking about no significant impacts, and I

1

2

3

4

12 also disagree with that because I think it is
13 significant. I know it's handy to put that in there
14 because then you don't really have to do much work.
15 But I think it's very significant.

4

16 Of course, the cumulative impacts of having all
17 these buildings, CRT, and then it goes on and on and
18 on with the buildings that you want to have up there.
19 I think it's a bad idea.

5

20 I know it sounds great to talk about Gold, LEED
21 standards and Green Buildings, but we're not really, I
22 think, confused about that. It just means that
23 there's more money that's going out to build things to
24 a higher standard.

6

25 So in regard to the Old Town location, the whole

26

1 hillside, I believe, has got toxic waste in it. So
2 before anything is built, it's very important to clean
3 up the toxics, to address that issue before even
4 thinking about building anything.

7

5 MR. CHAPMAN: Thank you for your comments.

6 The next speaker will be Stuart Jones, and he will
7 be followed by Amy Merryday.

8 MR. JONES: Hello. My name is Stuart Jones.

9 I have a series of questions that I'd like to ask
10 you guys. I want to know, when you're talking about
11 cumulative impacts, how you're accounting for
12 basically this building being built, being surrounded
13 by other massive projects that the University has
14 going at this very moment, including Helios East at
15 the bottom of Hearst. And you also have the creation
16 of the sports/entertainment complex and the expansion

8

17 of the stadium to the south of this project.

18 And so these are massively large projects, and as
19 you can imagine, there are going to be cumulative
20 noise impacts, cumulative quality-of-life impacts,
21 cumulative air quality impacts.

22 And I think to say one -- not only are you going
23 to have trucks going down Hearst, but you're also
24 going to have trucks going down Daly Road and Piedmont
25 Avenue.

27

1 And I'm curious as to how you are going to
2 adequately address these impacts and what you're going
3 to be doing to mitigate such intense impacts. Because
4 essentially, right now, they have turned Daly Road --
5 it used to be a two-lane road, now they're putting --
6 traffic is running two directions on one lane.

7 So, you know, what are you guys -- I feel as if
8 you're giving us some sort of -- it's convenient for
9 you to say there are no impacts, but in fact I believe
10 that they are rather intense.

11 Another thing. I want to know where the comments,
12 why -- I want to know what happened to the comments on
13 the previous Helios building. There was a roomful of
14 people, people commented, what happened?

15 I want to know why there was no EIR for the Helios
16 west. What happened to that? Why does this Helios
17 building deserve an EIR, and Helios West is just
18 tiered off of a previous EIR? Why are you not tiering
19 this building off the previous EIR?

20 I would also like to know why stimulus money is

8

9

10

11

21 being used in the name of public research, but in fact
22 we know it's proprietary industrial research. And why
23 British Petroleum was not mentioned in your
24 presentation.

11

25 I would also like to know why you did not include

28

1 alternative sites in your presentation. I know that
2 the Lab is looking at alternative sites in Richmond
3 and Alameda. And it seems to me this is acknowledged
4 by the state government, by the U.S. Geological Survey
5 that this is a high-risk earthquake and fire hazard
6 zone.

12

7 I want to know why you guys think that it's okay
8 for you to negligently develop adjacent to the Hayward
9 Fault when alternative sites do exist.

13

10 I also want to know why you believe that synergy
11 is still so important to your research when we live in
12 a modern world that has the technology. We solved
13 Swine -- Alien Flu using Skype. So we don't have to
14 continue to build in such a high-risk zone.

14

15 I also want to point out that we are adjacent to a
16 children's museum, and we're also -- we're not just in
17 a canyon, we're also adjacent to residential zones as
18 well that face incredible potential impacts, public
19 safety impacts, and what you are doing to mitigate
20 those impacts. Thank you.

15

21 MR. CHAPMAN: Thank you for your comments and
22 questions.

23 The next speaker will be Amy Merryday, and she
24 will be followed by Leslie Emmington.

25 MS. MERRYDAY: Hi. Where is this project in
Page 24

16

1 the long-range development plan?

16

2 The speaker talked about mimicking photosynthesis
3 and we heard about artificial devices. We did not
4 hear because we're nanoparticles tonight. I'm
5 assuming these things are nanoparticle. I heard the
6 word "rod" and I heard the word "membrane."

7 And the schematics looked as if it was like a
8 whole bunch of rods that were a whole bunch of
9 nanoparticles.

10 And we have heard at length about the need to be
11 near like a foundry and why people have to be close
12 together. I have questions specifically about the way
13 that such artificial machines would be moved from one
14 building to another, artificial devices would be moved
15 from one building to another.

17

16 what are the environmental conditions that are
17 going to allow this mimicry of photosynthesis to
18 occur? We didn't hear anything about the chemical
19 conditions or the temperature or sort of the space
20 that this would occur in.

21 The fuels that come off of these engineered
22 membranes, are they volatile? How does one capture
23 the fuels that come off of these membranes? And how
24 will they be stored? Or is it a dynamic system?

25 would it not make sense to do this work somewhere

30

18

1 else? Rather than hanging onto the idea that we can
2 and need to generate more fuel so that we don't have

19

3 to give up our wasteful lifestyle, isn't it about time
4 to give up that sense of entitlement? When are we
5 going decide that we can use less and not ruin our
6 world?

19

7 what are the federal guidelines for nanoparticles?
8 How will new regulations come online to an existing
9 project?

20

10 when you talk about integrating into the Lab
11 environment, for many of us who have been watching
12 what the Lab has done over the past few years, that
13 means integrating within the toxic plumes, within the
14 tritiated creeks and within the contaminated soils.

21

15 MR. CHAPMAN: Thank you.

16 Our next speaker is Leslie Emmington, and she will
17 be followed by Pamela Sihvola.

18 MS. EMMINGTON: Yes, thank you. My name is
19 Leslie Emmington.

20 The first concern, of course, is an environmental
21 impact in the greatest sense of an area that should
22 not be filled with research and development.

23 And it's along those lines, Jeff, that our first
24 comments from the community, many of us felt truly
25 impacted by the Helios Project in Strawberry Canyon.

22

31

1 You referred, with some grace and appreciation, to
2 those sentiments expressed strongly and being filed in
3 court.

4 But the real reason that Helios was moved out of
5 the canyon and the EIR was decertified was because of
6 an alarm about the geotechnical conditions of the
7 site.

8 The question is the geotechnical conditions of
9 this site are equally of concern. And this Draft EIR
10 appears to lack any offering of discussion that's
11 serious or reports on the geotechnical conditions.

12 There's a reference to Alan Kropp's report, and
13 you go online to look at it, and it's locked. It is
14 not available to the public. We know that Alan Kropp
15 is the latest consultant for your borings and your
16 reports, and whatever he's done on this project is
17 locked.

18 The second thing is in the DEIR, there is
19 reference to -- what is it called -- it's called
20 2010 -- LBNL 2010. What is that? It's not in the
21 report.

22 So if we're saying that the Helios protest was
23 because of environmental conditions par excellence,
24 they're also geotechnical in the very decent sense for
25 you and for us. This is not the right place to build.

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1 We are aware that you know that, more and more,
2 and even your own staff and your research. It's
3 throwing good money to bad. It's throwing federal
4 money to a potentially extremely risky site. And we
5 all know why. This is not the place to discuss it.
6 It will be discussed as we respond.

7 So for no significant project impact, it seems to
8 me, we're all potentially at risk being impacted by
9 soil conditions. We're trying to play God and
10 re-create something out of new -- whatever. But God
11 is already there and the soils are bad. They are

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12 filled with water. They're subject to earthquakes
13 which are dynamic and coming any day. Thank you.

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14 MR. CHAPMAN: Thank you for your comments.

15 So our next speaker is Pamela Sihvola, and Pamela
16 will be followed by Mary Mitchell.

17 MS. SIHVOLA: I just wanted to ask a couple of
18 questions first. Who is funding the demolition of the
19 SERC site in the Old Town? Who is funding the
20 construction of SERC? Who is funding the research?
21 How are nanoparticles prevented from entering the
22 atmosphere since there are no filters in existence to
23 do that? And when will the NEPA documents be
24 circulated for public review?

25 I'd like to remind the Lab, UC, Department of

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1 Energy, all principals involved in making decisions,
2 how to spend scarce taxpayer funds most prudently, of
3 a statement made by Paul Alivisatos last spring --
4 this is the Lab director. And this is what he said:

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5 "Since the nation has decided to rely on science
6 to lay a foundation for the future, as well as help
7 dig ourselves out of recession, our job with the labs
8 is to make sure there is good return on investment."

9 And then the writer of this article comments,
10 "Paul Alivisatos realizes this is his high-stakes
11 assignment. Time is running out."

12 And yet, we are here again to comment on another
13 project proposed for the unstable Strawberry Creek
14 watershed site. There has never been any direct,
15 truthful, transparent, credible, scientific analysis,
16 conquering garnis (PHONETIC) courtesies called a
Page 28

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17 theory, even though all evidence supports him; no
18 serious acknowledgement from LBNL that, indeed, the
19 Strawberry Canyon, Strawberry Creek watershed site is
20 the most dangerous proposition in the nation to any
21 development.

22 And yet, the planning to expand a nuclear
23 industrial complex at the site continues defying any
24 logic, science, financial prudence and responsibility.
25 This is a prescription for a national disaster.

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1 When the Hayward Fault explodes, all natural gas
2 pipelines that cross the Hayward Fault servicing LBNL
3 explode, and if the water lines traveling in the same
4 utility trenches, indeed, explode at the same time, as
5 was the case with the September 9 San Bruno disaster,
6 there will be no water to fight the ensuing
7 radioactive fires in the canyon.

8 This proposition is doomed. LBNL, UC, Department
9 of Energy, stop playing Russian roulette with federal
10 and state funds and with the lives of thousands of
11 innocent residents now living around the Lab, on
12 Panoramic Hill and in the north and northeast
13 neighborhoods of Berkeley.

14 It is time to offload facilities from the unstable
15 Strawberry Creek watershed site with its
16 unconsolidated soils, water and mud of a collapsed
17 caldera; riddled with landslides and earthquake
18 faults; stifled by logistical, environmental,
19 geotechnical constraints and legal challenges
20 currently crippling LBNL and its future.

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21 And in closing, the recent articles in the
22 Berkeley papers are merely a hoax to attract Berkeley
23 Lab. Daily California: "A new facility may be ahead
24 for the Laboratory."

25 Indeed, we ask you to stop all new projects in the

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1 canyon, for the canyon, and very, very seriously
2 consider putting these new projects as anchor
3 buildings to the new proposed second LBNL campus.
4 Thank you.

5 MR. CHAPMAN: Thank you.

6 The last speaker is Mary Mitchell. And as she
7 goes to the podium, is there anyone else who hasn't
8 spoken who would like to speak? Because if you do,
9 please fill out a speaker card while Mary Mitchell is
10 speaking. Otherwise, she will conclude our comments
11 tonight. Thank you.

12 MS. MITCHELL: I would like to say first, the
13 concept of having this at the new campus, not if it's
14 in Berkeley. And I've known for three years it's
15 likely to be the Bayer site. I know people that work
16 at Bayer and know how they have polluted the waters.
17 And I don't have time to go into it.

18 And we know that Lawrence Berkeley Lab has been
19 polluting the environment in a very bad way. The last
20 thing we want is to have them down there in Berkeley,
21 where we need to clean up and where we have been
22 trying to clean up the Bay for 40 years. And we need
23 to do that. That's the most important for the
24 greenhouse gases, not putting concrete buildings and
25 paving the earth, et cetera.

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1 And so I like the idea of the multiple sites that
2 you've talked about, Alameda. And we hear Mare Island
3 or Bayer Island or, you know. There are many -- the
4 genomic site in Walnut Creek, sites in Oakland, et
5 cetera.

6 what I think -- and I tried to talk to
7 Mr. Alivisatos about this -- he believes that you need
8 to have all your scientists together. I think that's
9 too much like a monocrop, you know what I mean? And
10 it's disastrous.

11 And by going to the smaller sites, I mean, having
12 smaller sites with specific projects. In Alameda, I
13 think of Alameda as very sunny, so if you were there,
14 it might be a good place to do your solar, possibly.

15 And so what you would do is you would, instead of
16 what you do, come up against the people, have this big
17 board, then you end up doing what you want to do.

18 Instead, do something unique. It would be really
19 beautiful. You would really get creative thinking.
20 You go to these mini sites, and what you do is you
21 tune in to the environment. You have water in
22 Alameda.

23 How can you help clean up the environment? How
24 can you even design a project that's not going to --
25 that's going to harm it in the most minimal -- not

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1 harm it, you're going to even it up, that type of
2 thing. And you're going to work with the neighbors

3 and you're going to work with the people, because
4 they're very sharp. There are some young kids in here
5 that are sharp. And so that's where I'm coming from.

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6 And then the nanoparticles, I remember when the
7 nano deal first came in. I read an article in the
8 Daily Cal, and I was shocked because it said that you
9 weren't going to go by the precautionary principle
10 because you didn't know what you were making. I
11 couldn't believe that.

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12 It's still on my bulletin board. I've left it up
13 for years because I haven't gotten an answer to that
14 one.

15 I'd like to say that I asked the lady over here
16 about the height, and she said I could ask her, and
17 she said that she wouldn't be able to tell me. So I'm
18 asking you. And I'd like to get an answer. I think
19 maybe other people would want to know.

20 I want to know what it is. I don't want to know
21 that "You're not going to see it because there's
22 trees." I just want to know. If you don't know
23 exactly, could you tell us now. Even say it's between
24 something and something else, that will be fine.

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25 MR. CHAPMAN: Okay. Thank you.

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1 MS. MITCHELL: If I have any more time, I'll
2 keep speaking. I just want to say that up there in
3 the canyon where people say you should not build, I
4 totally agree. That's our greenbelt. Other cities
5 have a greenbelt, but not Berkeley. And we need a
6 greenbelt.

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7 MR. CHAPMAN: Thank you for your comments.
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8 Are there any other people who haven't spoken who
9 would like to speak? No. Okay.

10 I'm going to conclude --

11 AUDIENCE MEMBER: Could I ask a procedural
12 question, not a project question?

13 MR. CHAPMAN: Well, why don't I conclude the
14 public hearing, and then we can speak after, if you'd
15 like.

16 MS. SIHVOLA: Could you ask if somebody wants
17 to have a second round?

18 MR. JONES: Nobody's in a rush.

19 MS. SIHVOLA: Yeah, we have plenty of time.
20 So why don't you let people speak a second time?

21 MR. CHAPMAN: Okay, Leslie.

22 MS. EMMINGTON: So we know this is a federal
23 project. Right? It's LBNL, and it's federal stimulus
24 money.

25 MR. CHAPMAN: It's funded by the State of

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1 California and private sources. It's not funded by
2 federal funds. It will have federal research going on
3 inside of it once it's constructed.

4 MS. EMMINGTON: So it's a federal project
5 because it's for a federal action?

6 MR. PHILLIBER: We're not going to talk about
7 that stuff tonight. We're talking about the Draft
8 EIR. If you have questions about any federal
9 involvement with the project, you'll need to submit
10 those questions to the Department of Energy. I can
11 give you their --

12 MS. EMMINGTON: So you're saying basically
13 tonight that it's not going to have any NEPA review.

14 MR. CHAPMAN: No, we're not talking about NEPA
15 review tonight.

16 MS. EMMINGTON: Well, will it have NEPA
17 review?

18 MR. CHAPMAN: We're not the ones to decide
19 whether it has NEPA review. We're involved in the
20 state process, the CEQA process, and that is the
21 purpose of this hearing.

22 MS. SIHVOLA: I have a question.

23 MR. CHAPMAN: Pamela.

24 MS. SIHVOLA: Michael Crommie, when he was
25 speaking, he specifically emphasized the fact that

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1 this is DOE funding. It is not British Petroleum
2 money. It is Department of Energy money.

3 who, indeed, is going to make the decision
4 regarding NEPA review? And when?

5 MR. PHILLIBER: So Michael Crommie -- and this
6 will probably be the last dialogue we'll have on
7 this -- was talking about research that's ongoing.
8 Solar energy research that he's working on.

9 He was speaking more to the research than to the
10 actual construction of this project, that sort of
11 thing.

12 If you have questions about whether there is a
13 federal component to this project, you'll have to
14 direct those questions to the Department of Energy.
15 The Berkeley site office is a great place to start.
16 That's the Department of Energy's presence at the Lab

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17 site. I can give you the contact person, if you come
18 see me after the meeting.

19 But we're not here to speculate about what may or
20 may not happen as far as DOE involvement with this
21 project. That is entirely up to DOE and that is
22 entirely up to their processes.

23 MS. SIHVOLA: Well, the Department of Energy
24 representative is here, Kim Abbott. Maybe he can
25 answer these questions.

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1 when, indeed, are you going to be --

2 MR. PHILLIBER: Kim is here as a guest. He's
3 not, I believe, prepared to speak. You might be able
4 to approach him on the way out. This is a University
5 meeting. It's not a Department of Energy meeting.
6 And like I said, we're not going to get into a
7 dialogue here on that topic.

8 MS. SIHVOLA: But he's the NEPA document
9 manager at the Lawrence Berkeley Laboratory site
10 office.

11 MR. PHILLIBER: That is correct. He's the
12 person you will want to contact during business hours.
13 Right. Exactly.

14 MS. SIHVOLA: But I want to have this question
15 on record, and I would like to have it answered.

16 MR. CHAPMAN: We appreciate your question,
17 but --

18 MS. SIHVOLA: when, indeed, will the NEPA
19 review begin and what will be the process? That's my
20 question.

21 MR. CHAPMAN: Maybe you didn't hear the answer
22 the first time, which is this is a CEQA hearing, which
23 is a state process. We are complying with the state
24 law under the California Environmental Quality Act.
25 We're here to comply with that law, to take

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1 testimony and questions under the CEQA process. We're
2 not here to talk about the NEPA process, which is a
3 separate process under a federal National
4 Environmental Policy Act.

5 MS. MERRYDAY: I'd like the record to show
6 that there are more Lab employees than members of the
7 general public here.

8 MR. CHAPMAN: Okay. Thank you for that
9 comment. That was a comment from Amy Merryday. And
10 her comment was that there are more Lab employees
11 here.

12 I'm not going to continue to take informal
13 questions. Wait a minute. Since you are walking up,
14 I will recognize you and you will be the last person
15 to speak. And you are Stuart Jones, for the record.

16 Does anyone else have a question or comment?
17 okay. I will take Stuart Jones, and then I will take
18 Mary after Stuart Jones, and then we will conclude the
19 public hearing.

20 MR. JONES: For the record, I'd like to state
21 that my understanding of CEQA is not a series of, you
22 know, procedural hoops that you jump through, but
23 actually the public -- by speaking with the public,
24 you actually become better informed about your
25 projects so you can be better informed when you make

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1 your decisions.

2 So as far as I'm concerned, this should be a
3 beneficial process for you guys, and our concern about
4 what's going on in our community should be
5 something -- and our exuberance about it all should be
6 something that is actually making you -- it should be
7 the driving force behind what you do. So I hope that
8 your frustration is not, you know, too...

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9 MR. CHAPMAN: We appreciate your comments, and
10 that's why we're here, to hear the comments of the
11 public on this project in this process --

12 AUDIENCE MEMBER: No. It's the law. You're
13 here because it's the law.

14 MR. CHAPMAN: And all of your comments are in
15 the record and they will be responded to in the Final
16 EIR. So we appreciate you making comments on the
17 project, on the topic of the project.

18 MR. JONES: Right. Right. Anyway, so a
19 couple comments that I wanted to make. My first
20 comment is about the timeline. So previously, when I
21 came here and commented about the timeline -- or when
22 you guys had the first Helios bill, you also presented
23 us with a timeline.

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24 And there's this sort of, you know, sense that you
25 are just going to -- regardless of what we say here

1 tonight, you're going to proceed on time with your
2 timeline, and it's going to be banged out by 2013.

3 And I want to know how our comments affect that
4 timeline.

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5 I also want to know, the professor mentioned that
6 there's going to be biofuel research, and I want to
7 know where those biofuels are going to be grown. I'd
8 also like to know what the impacts of those biofuels
9 on the communities in which they will be grown because
10 it will be an extension of that building will be in
11 how those impacts will be mitigated. Thank you.

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12 MR. CHAPMAN: Thank you for your additional
13 comments and questions for the record.

14 Mary Mitchell will be the last speaker.

15 MS. MITCHELL: I appreciate Stuart's questions
16 about the biofuels. I was thinking about -- that
17 Pamela said Mr. Alivisatos said time is running out.

18 And I have known for several years that they want
19 to make these biofuels and they want to sell them to
20 China and India. And that concerns me as well because
21 then they'll be driving -- paving more earth and
22 driving more cars, and you all will be patenting more
23 of these biofuels and making a lot of money on those
24 patents.

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25 And so it might not directly connect with BP, but

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1 it connects, to me, connects in my mind to be BP
2 because you've got the BP at the Helios down on
3 Hearst, and then you're making ethanol, and the BP
4 makes diesel fuel that fuels our transportation fleet
5 in the country.

6 And so when they're involved in patenting ethanol
7 and other higher alcohols that you want to make, then

8 that just cuts the diesel fuel by like five percent.
9 People might call it biofuel. I don't call it
10 biofuel. And ethanol doesn't always do the job,
11 doesn't really improve things, according to some
12 people.

13 And so the whole thing is very questionable. And
14 so if Mr. Alivisatos says time is running out, maybe
15 that's good. And maybe that idea or other people's
16 ideas that you don't do it here, but if you were doing
17 it in other places, smaller places, and tuning in to
18 the people and the environment, maybe you could think
19 of some other things that are more creative and more
20 helpful to our environment, that you're always doing
21 the stuff in the name of helping the environment.

22 And what Stuart is talking about is something that
23 I've had nightmares about. Because of all of those
24 indigenous people, people in Haiti get two dollars and
25 go -- you plant these fields like slave plantations.

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1 And the people get two dollars, and they go to
2 7-Eleven and buy Ho-Hos or something.

3 when they could be -- the people in Haiti are in
4 such a terrible situation that people should be
5 helping them to get back to where they can fish. You
6 know, they live in a country where they can grow their
7 own food, and they shouldn't be put in plantations.

8 MR. CHAPMAN: Okay. Thank you for your
9 comments.

10 That concludes the public hearing. I want to
11 thank you for coming and participating in the process.

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SERC_PublicHearing_9-23-10
(whereupon, the hearing concluded
at 8:02 p.m.)
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REPORTER'S CERTIFICATE

I, JUDITH L. LARRABEE, a Hearing Shorthand Reporter in the State of California, duly authorized to administer oaths, hereby certify:

That I am a disinterested person herein; that the foregoing scoping meeting was reported by me in shorthand, and thereafter transcribed by means of computer-aided transcription.

I further certify that I am not of counsel or attorney for any of the parties to said scoping meeting, nor in any way interested in the outcome of said scoping meeting.

Page 40

17 IN WITNESS WHEREOF, I have thereunto set my hand
18 on this 7th day of October, 2010.

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Judith L. Larrabee, Shorthand Reporter

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