

LBNL COMMUNITY ADVISORY GROUP (CAG)

CAG Meeting Summary

Monday, November 8, 2010

7:00 pm – 9:30 pm

North Berkeley Senior Center

CAG Members Present:

Marcos Gandara, Community member

Paul Licht, UC Botanical Garden

Dan Marks, City of Berkeley Planning Department

Dean Metzger, Berkeleyans for a Livable University Environment (BLUE)

Roland Peterson Berkeley Chamber of Commerce (*interim*)

Phil Price, LBNL (employee)

Phila Rogers, Community member

Carole Schemmerling, Strawberry Creek Watershed Council

Elizebeth Stage, Lawrence Hall of Science

Anne Wagley, Community member

CAG Members Absent:

LeRoy Blea, Berkeley Community Health Commission

Rebecca Daly, UC Berkeley (student)

Whitney Dotson, Community member

William Gilbert, Claremont Elmwood Neighborhood Association (CENA)

Mark McCleod, Buy Local Berkeley

Welcome and Introductions

Daniel Iacofano of MIG welcomed CAG members, community members and staff, and provided a brief introduction to the evening's primary topics of discussion: groundwater management at the Lab and discussion of CAG member concerns as expressed in a letter written on October 29, 2010.

Daniel invited a round of introductions. He noted the number of issues that have been discussed during meetings to date, and the diverse set of concerns and ideas held by CAG members and other process participants, as recorded in the Preliminary Community Issues and Concerns document (available online at www.lbnl-cag.org).

Update on Currently Proposed and Possible Future Projects

Jerry O'Hearn provided a brief description and overview of the status of seven currently proposed LBNL projects. He also gave a brief update on the Bevatron demolition.

Seismic Phase 3 and the User Test Bed Facility project were both identified as projects that the CAG and community members have opportunity to influence early in the process. Seismic Phase 3 includes another general purpose laboratory, renovation of existing buildings, and building demolition. Design will begin in 2012 or 2013. The User Test Bed Facility is currently in the design phase.

Report on Lab's Economic Impact Related to Second Campus Selection and Implementation

Amy Herman of CBRE consulting provided a general overview of the likely economic benefits of a second LBNL campus. The information presented was illustrative in nature and was extrapolated from a larger study conducted for the Lab, published earlier this year and available on the Lab's website.

Amy provided an overview of the economic benefit analysis conducted, which looked at ongoing benefits related to operations of the proposed second campus. Indirect and induced effects (together, multiplier effects) related to job generation, wages, and sales were identified and interpreted.

The economic effects of the Lab's existing Joint BioEnergy Institute (GBEI) and Joint Genome Institute (JGI) were used to determine the following generalized expectations of what a second campus could mean for the Bay Area economy:

- \$280 million in estimated spending nationwide, with \$55 million in the Bay Area
- 925 jobs, including jobs at the second campus
- \$70 million in personal income benefits

It is assumed that the JBEI (Emeryville) and JGI (Walnut Creek) will comprise 42 percent of the future second campus. The above benefits include those related to the two existing facilities.

Estimated Bay Area impacts are regional, but a proportion is typically concentrated in the area of the facility. A final study of the potential economic impact of a second campus will inevitably have different results, as plans for a second campus become more specified.

CAG Member Questions and Comments

The following is a summary of CAG member statements and questions related to Ms. Herman's presentation, and, where applicable, Ms. Herman's responses.

- Did you notice differences in economic impact based on where a second campus would be located (for example, the difference in impact when locating in a dense vs. less dense area)?
 - That level of scrutiny wasn't part of this analysis. Generally, the more dense an area and the more local the economic providers, the greater the local economic impact.
- Is there a calculated cost to the community in terms of new, needed services resulting from second campus development?
 - CBRE has not analyzed economic impacts of the second campus. Generally, this will depend on the amount and type of infrastructure needed, where the second campus will be located, area density, and the existing infrastructure in that area.
- What is the economic benefit or impact of a second campus for the Hill?

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- The second campus should be an open campus so the dollars are spent in the local community and so the community truly reaps the economic benefits. LBNL is a closed campus and the current economic benefit to the surrounding community in terms of day-time spending is marginal.
- How many employees were you assuming, and what square footage were you assuming for your analysis?
 - The study was not based on specific square footage, but rather on the information provided by the Lab related to the two existing institutes as a proportionate share (42 percent) of the total future campus. The JBEI and JGI currently have 185 employees.
- Were you asked to do a cost-benefit analysis of construction per square foot?
 - No, for the purposes of this study we looked at the operational impacts of the second campus but not construction-related economic impacts.

Groundwater Management at the Lab

Preston Jordan, Lab Geologist with the Earth Sciences Division, shared a presentation on groundwater management at LBNL.

Preston covered general background information related to groundwater and groundwater contaminant plumes, including hydrologic conductivity at the Lab, or the ease with which water can move through pore spaces or fractures, and other key concepts such as how a plume's boundary is defined, and methods and steps taken to remediate or immobilize a plume.

Regulation of Groundwater Management

The following regulatory agencies oversee LBNL with respect to groundwater issues:

- The Department of Toxic Substances Control (DTSC) (*non-radiological contamination*)
- The Department of Energy (DOE) (*radiological contamination*)
- The Regional Water Quality Control Board (RWQCB)

The DTSC has set the California maximum contaminant levels (MCLs) as the long-term clean-up goal for the Lab. MCLs are the maximum allowable level of contaminants in drinking water, established by the California Department of Public Health.

History of the LBNL Environmental Restoration Program

Prior to passage of various laws in the 1970s, few mandates to industry existed related to groundwater contamination and cleanup. In 1988, DOE conducted an environmental survey of the Lab, and found enough information to justify beginning an environmental restoration program in 1991.

In 1992, the assessment phase of the environmental restoration program (ERP) ended. This provided the information needed to determine where to conduct subsurface investigations.

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The investigation phase that followed helped identify the location and type of contaminants present and how widespread they were. Interim corrective measures were put into place for plumes or contaminants where the information collected warranted a certain need for action. In 2000, an investigation for non-radiological contaminants was complete. In 2003, an investigation for radiological contaminants was complete.

In 2003, clean-up activities began in earnest to determine the long-term clean-up strategies. By 2005, various strategies had been selected and approved by the DTSC and the DOE. By 2007, clean-up systems and monitoring were in place.

Existing Contamination at the Lab

Mr. Jordan shared a map showing the current location of groundwater plumes. The two main classes of groundwater contaminants at the Lab are volatile organic compounds (primarily chlorinated hydrocarbons or solvents) and tritium, a radiologic isotope of hydrogen.

Less than five percent of the area of the Lab includes a plume with a concentration of contamination that exceeds the allowable drinking water concentration (MCL).

Mr. Jordan then discussed one plume of volatile organic compounds in the Old Town Area as an example of contamination at the Lab and the Lab's clean-up activities.

Conclusions

Mr. Jordan made the following points, in conclusion:

- Margins of all groundwater contaminant plumes are stable or shrinking
- Concentrations within all groundwater plumes are stable or decreasing
- Environmental Restoration Program (ERP) reports are available at:
www.lbnl.gov/ehs/erp/html/documents.shtml¹

"The ERP issues a report every quarter containing all the data collected during and describing activities undertaken during the quarter. The fourth quarter report is also an annual report that contains data from the previous year and more and includes information about the status and the clean-up of each plume."

CAG Questions and Comments

- Are you aware of groundwater contamination at the Lab contaminating surface water? For example, it has been suggested that fish in Strawberry Creek have been impacted by groundwater contamination. Is there data on this?

¹ A link to this page can also be found on the LBNL CAG website (www.lbnl-cag.org)

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- Yes, there is data related to this topic. The Lab monitors all the creeks regularly and could present this data at another meeting.
- Why is 1999 presented as the comparison year for existing groundwater contamination?
 - 1999 was the end of the ERP investigation phase. The Lab's well network was nearly complete by 1999. The well network tells where the plumes are located. If the Lab was to choose an earlier year, the plumes would look different, not necessarily because they were different but because knowledge of them was more limited.
- When does the Lab expect to achieve its clean-up goal?
 - This depends on the portion of the Lab. Where contaminant is primarily in volcanic rock with high hydrologic connectivity, this can be stripped out fairly quickly. Sedimentary rock permeability is lower. Getting these areas down to standard can take decades, particularly due to diminishing rates of return.
- How do you protect the streams?
 - The Lab intercepts all water that would go to creeks that it knows are contaminated, with the exception of the tritium plume. The reason for that is that there is no known treatment technology for removing tritium from water. At the same time, this is of less concern because tritium concentrations are already less than that the maximum concentrations allowed in drinking water.
- It would be desirable to have a presentation on surface water, and to arrange another visit for the CAG to see some of the wells and treatment operations and to see what's being done to protect the streams.
- Is there a possibility that any plumes have migrated off-campus that we may not know about?
 - The Lab has a network of monitoring wells to look for migration off-site. There are no hotspots near the boundary of the Lab and perimeter wells are all non-detect. We believe we've put wells in places logical to detect off-site migration.
- It has been said that, over the years, scientists dug holes in the ground to dispose of experiments. Have you been able to find all of those?
 - There is always the possibility that the Lab hasn't found everything once buried secretly. This is true of any industrial facility. However, the Lab has been thorough in conducting interviews and reviewing documents and photos related to where hazardous materials may have been used.

Public Comment

- Drinking water standards are generally political decisions. For example, the tritium standard was determined by the nuclear industry and has very little to do with health risk. This reality applies to many standards for solvents at LBNL.

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- It is an unfortunate practice to abandon wells before a site is completely clean. Closing a well before complete remediation is achieved prevents us from understanding what's happening underground due to the fault lines and complex geology of the site.
 - Wells themselves provide a potential conduit for water flow to the subsurface, so they are not zero-risk. Because of this the Lab tries to maintain the well network needed for monitoring while also getting rid of extraneous wells.
 - David Baskin, Professional Geologist for LBNL, reported that the Lab needs permission from the Water Board to abandon a well. The intent now is that where contaminant levels drop to the drinking water standards and stay at that level for at least a year, the Lab will request approval to abandon specific wells at specific plumes.
- How do contacts and earthquake faults influence groundwater transport at the Lab?
 - The only fault known to run through or obviously contact a contaminant plume that Mr. Jordan is aware of is the tritium plume. The lower end of the plume is in contact with an inactive fault. The fault is very clearly a barrier to the movement of groundwater. Wells on the downflow side of the fault do not have detectable tritium, whereas wells on the upflow side do.
- Are there materials being used at the Lab now that could be future sources of contamination? How are they being handled?
 - There are materials used at the Lab for various experiments that could be the source of contaminants. At the same time, there is much more strength in protocols now for how these materials are used and handled than there was 50 years ago.
- What is your annual budget for the site restoration program? When will the clean-up be finished?
 - Environmental restoration is conducted under the Environmental Services Group (ESG), which can help provide this information. Investigation continues, and either the ESG or the specific project will finance environmental investigations of areas not studied in the past.
- Please provide more information related to the presence of uranium and radionuclides in the soil beneath or nearby Building 15. Now that the DOE has closed the clean-up program for the area, the Lab has not carried over this kind of information.
- What are the provisions at the Lab to address concerns related to nanoparticles in the environment?
- There are materials at LBNL that may be of future concern, particularly related to the aggressive expansion of nanotechnology. There is no regulation from the State or Federal government related to environmental or human health protections, and the Lab has expedited the expansion of these operations. This is ethically irresponsible.
 - For information on the control of nanoparticles at the Lab, see the September 2009 report, *Worker and Environmental Assessment of Potential Unbound Engineered Nanoparticle*

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Releases. This document is available on the LBNL website and via a link on the CAG website (www.lbnl-cag.org).

- Please post historical landslide studies (1958 to 1976) on the Lab website.

Recommendation of Future CAG 2011 Discussion Topics as per Recommendation in October 29 CAG Member Letter

The final agenda item was to discuss recommendations related to the CAG process presented in a letter written by a group of CAG members. Key items noted in the letter and discussed during the meeting include involving CAG members in setting CAG meeting agendas, and improving the process to strengthen CAG influence over project-related decisions.

Phila Rogers, one of the signatories of the letter, shared brief comments. She is one of several CAG members who feel that the CAG is becoming part of the Lab's public relations campaign but that its advisory function has not been utilized.

Sam Chapman of the LBNL Community Relations Department read a response to the CAG letter written by Lab Director Paul Alivisatos. Regrettably, Dr. Alivisatos was unable to attend the meeting.

One CAG member suggested that the CAG focus on agenda items where actual CAG input can and will make a difference. Rather than focusing on activities of the past that were done consistent with the norms of the time, she suggested looking prospectively to projects and activities where the CAG can give meaningful advice and input.

Daniel suggested that the Lab provide a characterization for each project that identifies which points or elements of the project can be gainfully addressed and influenced by the CAG and the community.

Additional CAG Comments

- Consider the Campus Bay CAG as a model. The LBNL CAG should operate at this same level.
- Extend the invitation to join the CAG to regulatory agencies, including the EPA, Air Quality Board, DTSC, and Water Quality Board, and the California Health Department.
- Provide information on relative costs and benefits of constructing on the Hill as opposed to constructing in less hazardous areas, such as Richmond or Alameda or Fremont. Taxpayers have a right to know how much development activities are costing.
- This should be a transparent process and, despite the Director's desire, it is not yet transparent.
- Setting a more trusting and less adversarial tone will help the CAG to make the progress it desires.
- The CRT building is the perfect building to build somewhere else. Since the CAG began meeting, members have raised many concerns about this project.

Public Comment

- Hold a CAG meeting or a public forum on the CRT building. An environmental assessment (EA) to address the many serious questions, concerns and potential impacts related to the CRT building cannot possibly be adequate.
- The CRT building should be considered as an anchor building for a future second campus, rather than being built where it is proposed.
- It is critical that the Lab improve the way its website is designed and organized so that information is easy to find, and so related reports are easy to find in relation to one another.
- Despite frustration with the time it takes to get information, and continued doubts that the community is receiving all relevant information, I am very pleased with the CAG meetings and the information provided at the meetings.

Next Steps

The next CAG meeting will take place on Thursday, January 20, 2010, from 7:00 pm to 9:30pm at the North Berkeley Senior Center.

The current timeline for receiving proposals or qualifications for the second campus is as follows: release of the request for qualifications will occur in December, with the submittal deadline towards the end of January. The Lab will then review the most viable proposals. The eventual decision may be made by the end of next summer. There is plenty of opportunity for the CAG to comment as the possibilities are narrowed.

Staff note: The RFQ was released on January 3, 2011. It is available at:
<http://www.lbl.gov/Community/second-campus/> Responses are due by March 4.

The next CAG meeting will take place likely towards the end of the submission period, allowing for a report at the January 20 meeting.

Possible future CAG meeting topics include:

- Surface water contamination
- How hazardous materials are handled from “cradle to grave”
- Soil contamination and remediation