

Attachment 23 –
Attachment 14 of Pamela Sihvola and LA Wood Letter June 7, 2005

JOHN R. SHIVELY

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May 28, 1999

Dr. Charles Shank, Director
Lawrence Berkeley National Laboratory
1 Cyclotron Road, Mail Stop 50A-4119
Berkeley, California 94720

Re: City of Berkeley Fire Fighting System

Dear Dr. Shank:

Enclosed is a copy of my comments on the City of Berkeley's Draft Environmental Impact Report (DEIR) for the City's proposed Saltwater Fire Fighting System (SFFS). I propose an entirely different fire-fighting alternative, one that would be valuable to LBNL, referred to as the Hillwater Fire Fighting System. It would use a nearby existing source of hillwater rather than saltwater pumped from the Bay.

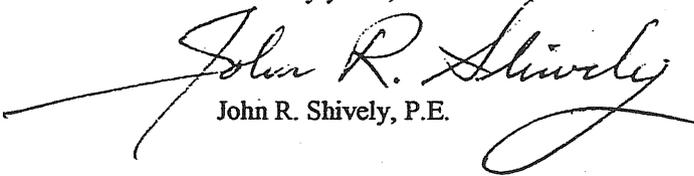
HFFS is of consequence to LBNL because it would enhance the fire fighting capability of the Lab's own fire protection. It would provide for reservoir impounded hillwater as a backup water source, should the normal water source fail during a major earthquake or a 1991 type conflagration. The HFFS alternative would utilize water from an existing hill area dewatering well located just south of the Space Sciences Laboratory. The water would be held in one or more large reservoirs.

I conceived of the idea of that vertical well, to intercept the hill-water that was causing the slides both inside and adjacent to LBNL, back in 1974. I retained Civil Engineer B. J. Lennert to install this well. I was the Campus Principal Engineer in the campus Office of Architects and Engineers at that time. During August of 1974 a major hill slide had occurred inside LBNL. It broke a Lab building, took out a portion of a Lab road, and was threatening Lawrence Hall of Science. At the same time another slide was developing above the Lab's corporation yard, threatening the University's Centennial Drive. Lennert's attempts to stop the slides by dewatering the hill area with horizontal hydraugers weren't working.

The well apparently stopped both slides. Presumably the campus continues to pump the well to prevent future slides. Later in the 70's, after I had left the A & E Office, the campus fire marshal had a large reservoir tank installed near the well, kept full by the well, to provide the primary source of water for fighting fires in the relatively inaccessible areas of upper Strawberry Canyon. Unfortunately, sometime in the late 80's, the campus removed that reservoir, to make way for the construction of a new laboratory building. Since then the water produced by the well has been dumped straight into Strawberry Creek. ↗

The HFFS alternative would not only enhance the Lab's own fire protection capability, it could have reliability and cost savings advantages for the City, compared to the saltwater proposal. LBNL's support is requested to encourage the City to conduct a feasibility study of the hillwater alternative. Please contact me if you wish more information about the hillwater alternative or the history of hill area slides.

Sincerely yours,


John R. Shively, P.E.

Enclosure:

Attachment 24 –
Attachment 15 of Pamela Sihvola and LA Wood Letter June 7, 2005

Poison pen

Federal reports identify hazards from Berkeley laboratory

BY AL WINSLOW

RADIOACTIVE and other toxic waste is leaking from Lawrence Berkeley Laboratory (LBL) into Berkeley neighborhoods and the UC Berkeley campus, according to investigators for the U.S. Department of Energy (DOE).

Federal inspectors are undertaking a quiet \$82.6 million cleanup of a mess created by "a serious lack of management and oversight," according to a 1992 DOE report.

The DOE, which finances research at the lab, issued two lengthy reports on pollution by the LBL, an initial assessment by what they call a "Tiger Team" of inspectors in

April 1991 and a cleanup plan in October 1992. Together, the reports, which were obtained by the Bay Guardian, identify 136 sources of lab pollution, more than 50 pollutants ranging from diesel fuel to radioactive strontium 90, 86 violations of government regulations or safety procedures, and general toxic deterioration of soil and groundwater around the lab.

In areas adjacent to the lab, investigators found radioactive tritium in Strawberry and Blackberry creeks, excessive amounts of heavy metals being dumped into the East Bay Municipal Utility District sewer system, pollution of Berkeley's municipal storm drains, and tritium being released into the air from a smokestack at the lab. The report also found lab-related pollution of San Francisco Bay via area drainage systems.

The Tiger Team found that researchers at the lab weren't following many required safety procedures. Among other problems, the report cited the mishandling of combustible chemicals and the use of non-functioning instruments to monitor radioactivity.

"LBL's management style can be characterized as unstructured," the report said, and "does not ensure the accomplishment of environment, safety, and health requirements."

Dale Nesbitt, chair of the Alameda County chapter of Sane-Freeze, an antinuclear organization, worked as an LBL engineer from 1976 to 1991. He said he had frequent run-ins with lab researchers regarding pollution and safety.

"You had the job of getting the work done under the contracts, so in many ways there was a conflict of interest," Nesbitt said. "Absolutely LBL didn't follow either federal laws or state laws."

Nesbitt said, however, he doesn't think dangerous amounts of radioactivity are escaping from the lab.

\$82.6 MILLION CLEANUP

The 1992 cleanup plan strongly indicates, but does not confirm, that during heavy rains some ground pollution around the lab washes downhill to the Foothill dorm area, the Scenic neighborhood, and then the UC campus. The report also states that storm runoff from the lab empties into a culvert at the head of Le Conte Avenue.

David McGraw, LBL's environmental health and safety director, said the DOE report was concerned about a "theoretical possibility" and that measurements of pollution in areas below the lab were just beginning.



ILLUSTRATION BY MESNEROS

"I do think we need to have a better understanding of the groundwater at the lab," he said, describing groundwater and other pollution at the lab as "very light."

DOE, however, considers the pollution serious enough to spend \$82.6 million to clean up LBL, said John Belluardo, DOE acting director of communications and planning in San Francisco. "These things, if left unattended, are a hazard," Belluardo said. The cleanup, he said, "is essentially devoted to preventive measures. There is no immediate health and safety hazard."

Asked why DOE would spend \$82.6 million to clean up the lab if there are no real prob-

lems, McGraw said, "Just because we're spending that amount of money, it doesn't necessarily follow that we have a severe pollution problem."

McGraw said, for instance, tests show cumulative tritium pollution in neighborhoods near the lab is .02 millirems per year, 1 percent of federal standards. "It must be understood," he said, "that people living in Berkeley receive 300 millirems of radiation annually just from the sun and other natural sources."

P.R. BROCHURE

Radioactive tritium is still being emitted from a smokestack at LBL and some of it is drifting over the nearby Panoramic and Scenic neighborhoods, investigators found. Though the emissions may meet EPA standards, the lab nevertheless reduced emissions from the stack by 81 percent between 1989 and 1992, placed radiation monitors in the neighborhoods, and prepared a public-relations brochure.

Titled "Questions and Answers About Tritium," the brochure reassures readers that tritium is "one of the least hazardous of radioactive materials" and states that it can be blocked by a piece of paper. The brochure notes, however, that "tritium can deliver a radiation dose if it is taken inside the body" through eating, drinking, or breathing.

Apparently few of these pamphlets actually have been sent out, though McGraw said they are available on request.

McGraw said pollution at the lab has been "71 percent corrected," but local watchdogs aren't so sure.

In a March 12 letter to LBL's cleanup team, the state's Water Quality Control Board objected to the use of more-lenient federal standards rather than tougher state and local counterparts in assessing acceptable levels of pollution.

Laurie Bright, spokesperson for Berkeley's Citizens Opposing a Polluted Environment (COPE), said: "Part of LBL's job is to downplay the situation in order to keep the lab operating. The truth is that no one has yet gotten enough information to assess the risks..."

"So where they say pollution is low or contained on the site, they just don't have any evidence to back it up." ●

LBL, city cooperate on cleanup of toxic waste in Berkeley hills

By Shannon Morgan

After years of environmental research and experiments, Lawrence Berkeley Laboratory is coming clean on hazardous waste contamination at its Berkeley hills location.

The federal Resource Conservation and Recovery Act has speeded up the effort to identify pollutants. In order to qualify for a federal permit to operate its hazardous waste handling and storage facility, LBL is required to make known all possible sources of contamination at the facility and prepare a plan to remediate any damage.

As LBL plans for the installation of a new hazardous waste facility move forward, environmental engineers are working to locate and correct possible contamination of local creeks from spillage and polluted ground-water from leaky underground storage tanks.

Though the investigation is still underway, a preliminary report released last fall identified 64 possible sites of contamination.

Working with a myriad of regulatory agencies, including the Department of Health Services, the California Environmental Protection Agency, the Regional Water Quality Board and the City of Berkeley, it will take LBL until 1997 to identify all and remediate all areas of contamination.

Denise Johnston, coordinator of Emergency and Toxics Management for the city, said her office has been involved with other agencies in oversight efforts.

"We're by no means the lead agency here. We're part of a regulatory cadre that will be part of the process and we've been meeting to figure out who is going to do what," she said.

As it stands now, the city's toxics program will oversee site restoration of contamination caused by seeping underground storage tanks at LBL.

Denise Johnston said LBL has a lot of work ahead but seems to be making a good faith effort. "They were pretty forthcoming with information. It's the first time LBL has been required to report (contamination) to that level of specificity," she said.

"It's a whole culture change for LBL to become a part of the com-

munity, as opposed to not having to respond to local and state regulations," Johnston said.

Nancy Shepard, an environmental attorney for LBL, said the lab is working hard to address community concerns.

"LBL takes this very seriously. We're in the business of protecting the environment. We really want the public to be involved and know what we are doing," she added.

Johnston noted that LBL seems willing to back up its pledge.

"They've added 100 people in their health and safety (department). Now it's like they've been invited to the prom and they're not sure if they know how to dance," she added.

While Johnston is optimistic about LBL efforts, members of the Environmental Advisory Commission have a number of concerns they would like to see addressed.

"The commission has taken the stand that as specific areas (of contamination) are characterized they should make an earlier effort to stop whatever process they are using that creates pollution and remediate it before 1997," CEAC chair Tamlyn Bright said of the plan.

"We're worried about off-site migration. In some cases there are traces of radioactive (waste) underground. The city's toxics program needs to march right up there and make sure compliance is achieved," Bright added, noting a concern that LBL does not inform the city promptly in the event of toxic spills.

However, Shepard said the organization takes all necessary steps under the law.

"The city of Berkeley has delegated authority under a number of programs, and LBL complies with the law in every respect. We submit reports to them and we're not informing them after (a spill) has been cleaned up," Shepard said.

As to whether site restoration can begin in contaminated areas as they are identified, Shepard said, "Our next phase is to do the work plan implementation of the site investigation. Some remediation can occur as you go along, but you can't do it all because there are later stages that deal with site remediation" for the entire site.

After review of LBL's report by city staff and the Citizens Environ-

mental Advisory Commission, the City Council July 6 passed a series of recommendations to LBL on improving site restoration plans.

The action, which passed unanimously with little discussion, asks that LBL address city concerns within three months, including:

- Questions about how LBL will address the issue of controlling pollutants that pose an immediate threat to public health and the environment.

- How LBL will control ongoing sources of releases of hazardous substances in an environmentally responsible manner.

- Whether LBL is a state certified laboratory qualified to analyze its own soil and groundwater samples.

- Whether LBL will test off site creek waters whose source is LBL for current levels of heavy metals, hydrocarbons and tritium.

- The need to improve communications between LBL and the city as a regulatory agency.

Bright said there are a number of reasons why LBL should comply with the city's request.

"If kids play in a creek that has traces of tritium in it, they take it into their skin and then you have radioactivity in your cells. A small amount of tritium can cause sterility in rats," Bright said.

Shepard said LBL officials have just received the city's recommendations and have not had time to respond to the concerns yet.

"We're considering all the comments and we always do consider comments that come from regulators and the public," Shepard said.

She did, however, note that LBL is already controlling its sources of possible toxic releases, but the city may not be involved in all aspects of environmental operations.

"We in fact do that (control sources of pollution). The city of Berkeley is one of a number of agencies that oversees what LBL is doing with respect to site clean up. Any allegation that we don't comply is completely wrong. We are undoubtedly doing more than RCRA (the federal act) requires," Shepard said.

As to the issue of contamination of local creeks, Shepard said LBL already has a program in place to monitor water conditions.