UCSF Wins Round in Fight over Lab

In a decision that the University of California at San Francisco (UCSF) has been anticipating for months, the California Supreme Court has ruled that there is no evidence that basic biomedical research at a university laboratory would hurt the public or the environment.

The decision cheered UCSF scientists who have spent more than 2 years fighting allegations that their work is too dangerous to be carried out in a building in a residential neighborhood near the campus.

However, the battle over how UCSF can use a laboratory building known as Laurel Heights is far from over. In a setback for the university, the court also ordered a new environmental impact report for the project. This will further postpone the time when UCSF can move its School of Pharmacy into the building and give opponents another chance to make their case.

Nevertheless, the university views the decision as a victory because the court rejected charges that the new laboratories would be unsafe. The justices devoted almost half of their 79-page decision to safety issues, concluding that there was "substantial evidence" that any potential hazards would be properly mitigated. Further, they criticized some of the charges made by opponents as "gross misstatements of the record," "greatly exaggerated" fears, and "dire predictions."

Ethan Schulman, an attorney for UCSF, said the decision appears to have "laid to rest, once and for all, the baseless allegation . . . that there's something risky about the university's research. It's a decision we're very encouraged by."

UCSF chancellor Julius R. Krevans said the decision is also important for other research-oriented universities, whose safety practices have come under increasing scrutiny from the public. He said he hoped the ruling would discourage people from opposing basic research on environmental grounds—a tactic that already has been used to delay construction of two buildings at Stanford University and to protest a building project at the University of California at Berkeley.

However, Kathryn R. Devincenzi, attorney for the neighborhood group that sued to stop the project, said she plans to take full advantage of the opportunity offered by the requirement for a new environmental report. "We're quite pleased with the [Supreme Court] decision. It's a very significant victory," she said. "Essentially we nipped [the project] in the bud, at a time when viable alternatives can be considered."

The controversy at UCSF started in 1985, when the university bought a 342,000-square-foot building, formerly headquarters for an insurance company, to relieve crowding at its main campus. When neighbors learned the building would include laboratories for 150 researchers from the School of Pharmacy, they sued to stop the project (*Science,* 11 March, p. 1229).

To the university's chagrin, an appeals court sided with the neighbors. It declared inadequate an environmental report prepared by the University and ordered the laboratory shut down. The California Supreme Court reopened the lab a few days later pending its own decision. In the 17 months since then, the small group of scientists already installed in the new laboratory has been working under a cloud of uncertainty, its research hampered by court-imposed restrictions on the use of radioactive isotopes.

The Supreme Court has now removed some of that uncertainty by declaring that the scientists can continue to work in the lab while the new environmental report is being prepared and that they can resume the use of radioactive isotopes. To close the lab down, as protesters had requested, would "seriously disrupt ongoing scientific research and perhaps cause the university to lose important faculty members and research funds," the justices wrote. "UCSF's research is designed to improve the state of medical knowledge and thus improve and even save lives. We are especially reluctant to interfere unnecessarily with such a salutary enterprise."

The court ordered UCSF to address two issues in the new environmental report: alternatives to using the Laurel Heights building and the potential impact of using the entire building for university programs. (The university is currently leasing about two-thirds of the building to a state agency.) Schulman said it will take at least 8 to 10 months to complete a new report and 18 to 20 months before a move could take place.

Nina Agabian, a molecular parasitologist who heads the group working in the new laboratory, said, "We're really gratified that the Supreme Court was able to take a clear and considered view of the real issue, which is whether or not science is safe to do in a residential community." But she worries about further delays. "We're losing millions of dollars in grant funds and the ability to recruit people," Agabian said.

■ **GLENNDA CHUI**

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DOE's Guide to Weapons Plant Spills

On 6 December, the Department of Energy (DOE) published its first comprehensive look at the pollution left behind by 40 years of nuclear weapons manufacturing, a mess inherited from the defunct Atomic Energy Commission.

Energy Secretary John Herrington estimated earlier this year that the total cost of cleaning up the weapons plants may be more than $110 billion. The money may be hard to come by. For example, in a related area, DOE has been told by the White House that it will not get the $200-million increase it seeks in its budget for safety improvements at the Savannah River Plant, just one of 16 sites that need attention. The money will have to be scavenged from existing programs.

The inch-thick report, called "Preliminary Environmental Survey of Defense Production Facilities," attempts to catalog all the chemical spills that are known at this time, ranking them by significance. Public attention on this subject has been increasing as states sue to have the federal government pay for cleaning up long-neglected dumps.

In its report, DOE notes reassuringly that three-quarters of the 148 "near-term" problems in its survey are barely severe enough to qualify as health risks under the standards used by such federal agencies as the Environmental Protection Agency. The public hazard in these cases, says DOE, "can be roughly equated to a level of risk [of fatality] of 10^{-4} to 10^{-6}," which is "an indication that most of the environmental problems are at a level of risk comparable to or less than that of environmental regulatory concern."

But some clearly are worrisome, such as the two at the top of the list, involving volatile chemical leaks at weapons plants in Rocky Flats, Colorado, and Amarillo, Texas. In both of these cases, contaminants have penetrated the soil near aquifers that provide water for cattle, crops, or humans. In Colorado, the concern is that Denver's drinking water might some day be affected by tetrachloroethylene. In Amarillo, the threatening chemicals are dimethylformamide and acetone.

DOE's list represents the culmination of a massive field survey undertaken by the agency's environmental staff beginning in 1986. The task will not be completed until next

fall, but, at the direction of DOE Secretary John Herrington, researchers fed the jumble of preliminary information into a data bank this year and sorted it using a computer model known as MEPAS. MEPAS weighed the potency of each pollutant, its dissipation rates, and its potential impact on humans at each site. After juggling these factors, MEPAS ranked the sites on a logarithmic scale, similar to the Richter scale for earthquake severity, running from 9 in the worst case to 0 for "problems that are not projected to reach receptors." The Colorado and Texas spills were ranked 9 and 8, respectively. Twenty-six others were ranked at 7 and 6, and the rest fell below 5, which DOE considers the cut-off point for active concern.

It is not clear yet how these rankings will be used. DOE claims the only purpose of the study is to identify gaps in its data and focus research on the most important sites. But the states that want DOE to get started on cleaning the dump sites are worried that the list may be used as method of choosing who will and will not get funded.

DOE can anticipate a barrage of criticism from political and technical kibitzers. In Congress, there are already complaints that the survey elevated "easy" problems to a high priority and postponed the truly difficult tasks—such as emptying the corroded waste tanks at the Savannah River Plant and Hanford. Senator John Glenn (D–OH) has asked the General Accounting Office to review the computer ranking methodology.

DOE may be criticized as well for giving a false impression that it has a firm grasp on the health risks at each site. While the executive summary dismisses "a majority" of the cases as posing "a very low potential for risk to the public," the body of the report warns that the conclusions are based on "very initial investigations" and should not be used to project absolute health risk. In fact, many of the spills involve a mixed broth of organic chemicals and radionuclides whose behavior in soil and water has never been well studied.

Dan Reicher, an attorney for the Natural Resources Defense Council, argues that DOE is to be faulted for ignoring regulatory and political issues in this report. The computer list is interesting, he says, but it may bear no resemblance to the priorities established by law. He estimates that DOE has already signed 30 agreements to clean sites around the country. Many include deadlines for action. Because DOE is not likely to get a large budget increase for this work, it is possible that the available clean-up funds have already been spoken for, and that the actual agenda will look very different from this list of technical priorities.

■ ELIOT MARSHALL

Furor in Fusion Labs

The new director of the Department of Energy's Office of Energy Research has created an uproar in the fusion research community with a proposal to shift up to $23 million away from ongoing experiments this year. Although it is not clear what Robert O. Hunter, Jr., wants to do with these funds, he plans to spend part of it to expand basic research on energy confinement in tokamaks, a reactor concept that some day may be used to produce electricity. His plan, however, is encountering strong opposition from ranking legislators on the House Science, Space, and Technology Committee.

The unexpected action has angered many in the magnetic confinement fusion research community because the program changes are being imposed after the start of the new budget year, which began 1 October. Although Hunter first advised top DOE management in August that he wanted to make changes, fusion laboratories were not informed of the revised plan until mid-November. The decision to implement these changes in fiscal year 1989, instead of next year, is having a severe effect on some fusion research programs.

Robert O. Hunter. *Wants to shift funds.*

The Princeton Plasma Physics Laboratory, for example, had to dismiss 120 contract workers that were making repairs to the Tokamak Fusion Test Reactor (TFTR). The lab took the action on 17 November in response to DOE's order for Princeton to shave $12.5 million from its $73.5-million fusion research budget. The funding loss for Princeton may actually be higher than it appears because the laboratory could have to pay millions of dollars in contract penalties resulting from the stop-work orders. Oak Ridge National Laboratory also may have to cut $6 million from its $16-million fusion budget and Los Alamos National Laboratory some $3 million. Another $1.5 million is slated to be taken from other scattered fusion programs.

Hunter wants to use part of these savings to expand research that will broaden understanding of confinement laws affecting the heating and behavior of plasmas within the doughnut-shaped tokamak. He told the DOE's Magnetic Fusion Advisory Committee (MFAC) on 6 December that it was now the policy of his office "to give highest priority [in the fusion program] to developing a predictive understanding of confinement in tokamaks." This could allow the program to build advanced experimental reactors more cheaply, he says.

The need to increase research on energy confinement in tokamaks was highlighted by MFAC this summer and Hunter cites this as a justification for reordering part of DOE's $350-million magnetic confinement fusion research program. Not all of the funds will be used for this purpose, however. Some $4 million has been earmarked for a contingency fund. Another $4 million may go to assess the state of laser-driven inertial-confinement fusion.

Congress, however, may not go along with Hunter's restructuring plan. Representative Robert Roe (D–NJ), chairman of the House Science Committee, and Representative Marilyn Lloyd (D–TN), chairman of the Subcommittee on Energy Research and Production, have indicated that they are against making changes in the research program this year. Traditionally, budget reprogrammings have been dropped when the House Science Committee has opposed them.

At press time, it appeared that Hunter might modify or abandon his proposal in light of protests filed by legislators, lobbyists, and the scientific community. Even if Hunter withdraws, the experimental schedules at Princeton's TFTR and Oak Ridge's Advanced Toroidal Facility still will suffer because DOE pulled back budget funds from the laboratories in November. As a result, research agendas had to be scaled back until Congress makes a decision, and that is not likely to occur before late January.

■ MARK CRAWFORD