preserved hearths in cave sites, most of which are less than 250,000 years old. Ancient, open-air sites like GBY are notoriously difficult to interpret. The cave site of Zhoukoudian in China was once thought to be the oldest example of controlled fire use, dating to 300,000 to 500,000 years ago, but even the evidence there has been found wanting (Science, 10 July 1998, p. 251).

Although it is “likely” that the burned wood at GBY comes from hearths, says charcoal expert Eleni Asouti of the Institute of Archaeology in London, “real evidence” would require proof that the wood fragments came from the same locations as the burned flint. But such stringent proof is rarely available even at much younger sites. Mirjana Stevanovic of the University of California, Berkeley, who spent years tracing the sources of fires in Neolithic houses in the former Yugoslavia, agrees that the case would be stronger with “more information on the spatial distribution of these finds.” Nevertheless, Stevanovic concludes, “the claim is impressive.”

Indeed, archaeologists say, if people were using fire at GBY 800,000 years ago, it might help explain the history of early humans in northern latitudes such as Europe. GBY sits in the middle of the so-called Levantine corridor, “at the crossroads out of Africa,” says Gamble. Thus it may be no coincidence that the earliest substantiated human sites in Europe also begin to appear right around 800,000 years ago. Says Colorado’s Villa: “The colonization of Europe, where temperatures probably dropped below the freezing point at times, is generally tied to the use of fire.” —MICHAEL BALTER

**Boston Weighs a Ban on Biodefense Studies**

**BOSTON**—A deeply divided city council has asked for legal advice on whether it can ban scientific research it deems dangerous to the community. The target is a $178 million biosafety level 4 (BSL-4) facility funded by the National Institutes of Health (NIH), to be built by Boston University (BU) near the city center. Even lab opponents say they are unlikely to win an outright ban, but a stormy 5-hour hearing on 20 April demonstrated that scientists disagree sharply over the facility’s value, community activists are outraged, and BU is on the defensive.

NIH chose the university in October as one of two private sites for the high-security labs, which will conduct research into infectious agents—including those which might be used by terrorists. The other, in Galveston, Texas, has encountered far less opposition.

BU officials insist that their lab, which is awaiting land-use and environmental-impact reviews, will be a plum for the city. They note it will be designed with advanced safety and security systems, bring in construction jobs and high-tech positions, improve the public health, and cement Boston’s position as a leader in biological and biotech research. But opponents say the dense urban site is a poor choice, given the expected traffic in deadly materials. They also question whether BU will control all the research, which they claim could include secret studies.

The battle over the lab’s fate, which began last fall and is likely to rage into the autumn, is turning heads even in a city known for the gusto of its political brawls. On City Hall Plaza, protestors in white biohazard suits carrying FedEx packages protested in the bright spring sunshine, while nearby vendors sold the day’s newspapers with a full-page ad paid for by BU touting the lab’s benefits. Inside, a city council member sharply accused opponents of engaging in “scare tactics” while one onlooker’s angry outburst led to his ejection from the council chambers.

BU senior vice president Richard Towle testified that it was highly unlikely any dangerous material could be released, because in more than 70 years of total operating time, no U.S. BSL-4 lab has had a serious containment failure. BU officials promise a series of impenetrable barriers: advanced biometrics for personnel identification, layers of security, and thick concrete walls. But neighbors are skeptical. “Nothing can be built!” to work as a perfect container, said Dolly Battle, who chairs Safety Net in the nearby neighborhood of Roxbury.

Towle said that NIH had recently given its assurance that BU will be fully responsible for research done at the lab, adding that “there will be no bioweapons and no classified research at this facility.” But David Ozonoff, a BU public health professor, told the council that BU will not have the authority to determine what kinds of research can and cannot be done in the lab. Although NIH does not do classified research, he noted, it does partner with organizations that do, such as the U.S. Army, which might want to use BU’s facilities. And if classified research goes on at the lab, “federal law will not permit them to disclose” that, Ozonoff added.

Opponents also charged that the lab will do more to threaten than promote public health. Ozonoff, who first backed the new facility last year, has changed his mind. The lab “is not likely to meet a public health need—and it may make us less safe” by creating new biological agents that could be used by terrorists, he told the council. He is not alone. More than 140 scientists, physicians, public health professionals, and academics wrote to Boston Mayor Thomas Menino 13 April, arguing that the lab poses “real and catastrophic risks to the health and safety of people in the local and surrounding communities.” Harvard Medical School cell biologist Daniel Goodenough adds that the benefits are likely to be so meager, and the threats so great, that “the biolab should not be built at all.”

City council members held off consideration of an ordinance prohibiting BSL-4 research but asked the corporation counsel to research legal precedents for banning research. Four members present were highly critical of the facility and likely would back such an ordinance. But council member Maura Hennigan—who supports a research ban—told Science that she’s not optimistic it would pass, given that trade unions and Menino favor the lab. “We may have case law on our side, but if [Menino] supports the project, then I don’t think the council will go against it.” Opponents still could throw up roadblocks before construction is due to begin in the first half of 2005. A draft environmental-impact statement will be released around June, and the Boston Redevelopment Authority must issue permits, a process that doesn’t begin until fall.

—ANDREW LAWLER