

THE REPORTER

Time Bomb on Mass. Ave.?

Tens of thousands of people drive past it every day. Amy Goldsmith, director of the Massachusetts Nuclear Referendum, confessed that she knew very little about it. Rachel Shimshak, consumer utility advocate for the Massachusetts Public Interest Research Group (MassPIRG), didn't even know it existed.

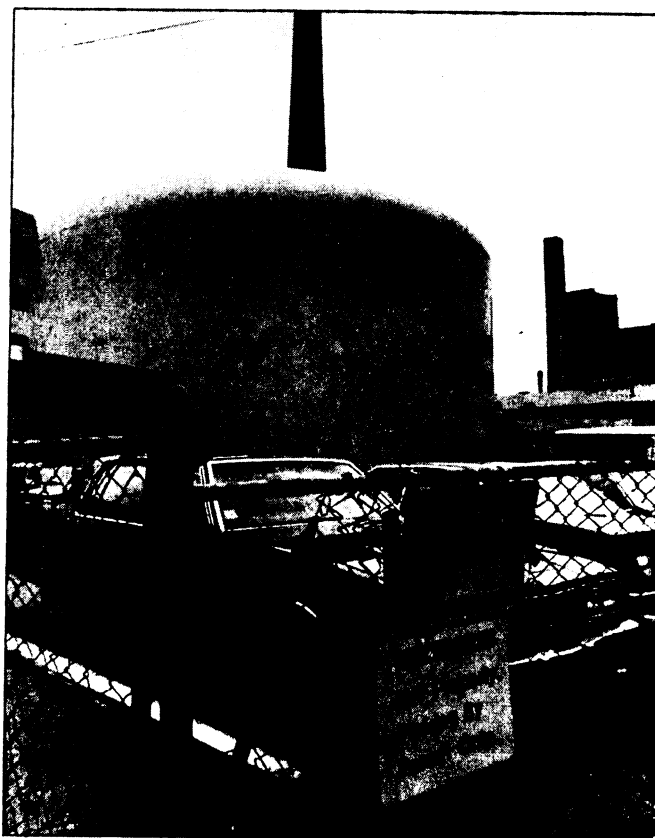
The nuclear reactor that MIT operates less than 50 yards off Massachusetts Avenue, at 138 Albany Street, in Cambridge, may not be very well known, but in a world where terrorism is a nightly staple on the network-news menu, some people say it's a sitting duck for a terrorist attack.

"If a terrorist wanted to strike somewhere in this area, the nuclear reactor at MIT would be a good place to start," says Cambridge city councillor David Sullivan. "There are probably 3 million people within a 60-mile radius of the reactor."

"The reactor at MIT would definitely be a target [for terrorists]," echoes Lieutenant Don Carney of the Cambridge Police Tactical Control Force.

Built in 1958, MIT's 5-megawatt nuclear research reactor is the second most powerful of its class in the country. (The University of Missouri at Columbia has a 10-megawatt reactor.) Although not nearly as powerful as a commercial nuclear reactor (which averages around 1,200 electric megawatts), the MIT reactor is considered vulnerable to terrorism for three main reasons: unlike commercial reactors, it's located in the middle of a densely populated urban area; it uses bomb-grade uranium for fuel (commercial reactors do not); and it has comparatively little security.

• *The Site.* Daniel Hirsch, a nationally recognized authority on research reactors and the di-



MIT's nuclear reactor.

rector of the Adlai Stevenson Program on Nuclear Policy, at the University of California, says that an "incident" (a leak caused by an accident or sabotage) at the MIT reactor could spread radioactivity as far as 60 miles from the site.

But Lincoln Clark, Jr., the associate director of the MIT facility, argues that people have nothing to worry about. "Even in a worst-case scenario, the radiation wouldn't spread beyond 100 meters. I could walk out there with a bullhorn or even shout that far to warn people. Then we'd barricade the area."

Clark believes that people "are at greater risk in an automobile than from nuclear reactors."

• *The Fuel.* The nuclear reactor at MIT uses weapons-grade, highly enriched uranium (HEU) for fuel. Some experts say terrorists could steal the nu-

clear fuel and build—or simply claim to have built—a nuclear bomb.

Theodore B. Taylor, a nuclear physicist and one of the designers of the Hiroshima bomb, testified before the Nuclear Regulatory Commission (NRC) last year that HEU could be stolen comparatively easily by terrorists using schemes "much less sophisticated than those used in stealing money, gold, or dope."

Taylor said it is possible to build a nuclear bomb with as little as 1 kilogram of HEU, but that any amount of HEU in the hands of terrorists would make any threat credible.

There are currently 22 other research reactors around the country using HEU. The University of Missouri at Columbia is allowed to keep 45 kilograms; MIT is second at 29 kilograms.

• *The Security.* No security

guards are posted outside the reactor facility. "Right now, if somebody wanted to drive a truck loaded with a bomb up to the reactor, what's to stop them?" asks councillor Sullivan.

Clark downplays the truck-bomb threat. "It would do damage and shut us down, but it would not be a hazard to the general public. Radioactive material would not escape. That containment building has a two-foot wall of concrete with a steel skin around it."

Lieutenant Carney isn't so sure. "The wall wouldn't stop somebody who wanted to do something," he says.

Says Hirsch: "University security is designed to check on the bowling alley and the campus barbershop to make sure the cash registers haven't been broken into. That's very different from preventing theft of material that can be used to make nuclear weapons."

A representative for MIT campus police refused to comment.

Hirsch says that MIT is not alone in having poor security. In his May 7, 1985, report to the NRC, titled *Nuclear Terrorism: A Growing Threat*, Hirsch asserted that virtually all of the university research reactors in this country "are particularly vulnerable to certain kinds of sabotage that could be of major consequence." The NRC is currently trying to draw up a plan mandating the replacement of HEU with low-enriched uranium in university reactors.

Meanwhile, councillor Sullivan says: "The law upholds very clearly the power of the city to regulate institutions for the protection of its citizens' health and safety. If things are as completely unregulated as they seem to be, I think the city ought to take action either to shut the reactor down or at least to ensure that there's adequate security. All it takes is one incident."

ROGER HARRINGTON



City of Cambridge

9.

COUNCILLOR D. SULLIVAN

IN CITY COUNCIL
November 18, 1985

WHEREAS: The attached Boston Magazine article indicates that the lack of security surrounding MIT's nuclear research reactor may pose a serious threat to the safety of Cambridge citizens; therefore, be it

ORDERED: That the City Manager, with the assistance of the Police, Fire, and Health Departments, the Emergency Preparedness office, and the Scientific Advisory Committee, analyze the safety risks posed by this reactor, recommend what action the city government should take in response, and report the findings of this study to the City Council as soon as possible.

In City Council November 18, 1985.
Adopted by the affirmative vote of 8 members.
Attest:- Paul E. Healy, City Clerk.

A true copy;

ATTEST:-

A handwritten signature in cursive script, reading "Paul E. Healy", written over a horizontal line.

Paul E. Healy, City Clerk.

Order # 9

F-388

C.D. Sullivan order re: City Manager, with assistance from the Police, Fire, Health, Emergency Preparedness Office & Scientific Advisory Committee to analyze safety risks posed by MIT's nuclear research reactor.

In City Council,

November 18, 1985

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