PHIL GRAMM
TEXAS

United States Senate

WASHINGTON, D.C. 20510

Nuclear Regulatory Commission
1717 H Street
Washington, D.C. 20555

Attention: Congressional Liaison

Dear Sir:

The attached communication is submitted for your consideration, and to ask that the request made therein be complied with, if possible.

If you will advise me of your action in this matter and have the letter returned to me with your reply, I will appreciate it.

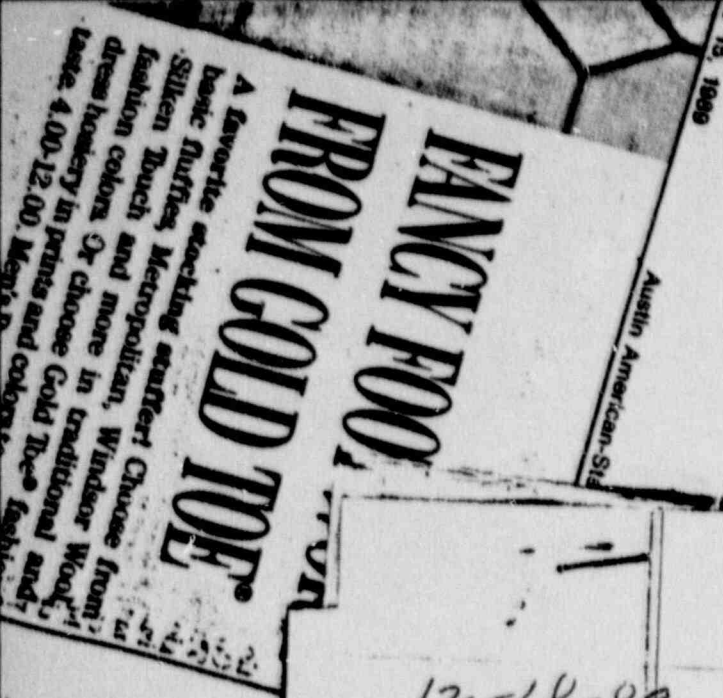
Senator Phil Gramm
370 Russell Senate Office Building
Washington, DC 20510

Attention: Ned James
(224-2934)

Yours respectfully,

PHIL GRAMM
United States Senator

PG:esj



12-18-89

Dear Phil

Will you please have the proper government agency check this report out? It reads to me like T. U., known for irresponsibility, has screwed up again.

Regards -

Joe Cox
Box 291
Wimberley, TX 78676
512-847-2527

UT says reactor project safe, despite ex-contractor's claims

Continued from A1

North Austin.

The heart of the teaching lab is the 1.1 megawatt nuclear reactor that will be used for education and research. The reactor does not produce electricity, but, if it did, could produce enough for about 350 homes.

"It's a fairly standard reactor similar to those in place at many universities around the country," said Dr. Bernard Wehring, director of the teaching lab.

The reactor is four times as big as one UT has operated at Taylor Hall on its main campus since 1963. The older reactor is now shut down and will soon be decommissioned.

In the reactor, at the bottom of the containment vessel filled with water, the nuclei of the atoms of the uranium fuel are split. The process produces neutrons, which split more atoms. The chain reaction produces heat and radiation.

The uranium fuel is in tubes called fuel rods. Separate rods that absorb neutrons can be adjusted to regulate the fission process and control the reactor.

Hilz's firm won the $3 million general contractor's share of the project in late 1986 and remained on the job until Oct. 3, 1988, when UT terminated his contract because of various disputes. Another contractor, R.L. Pender & Associates of Miami, Fla., was hired by Hilz's bonding firm to finish the work.

Now 17 months behind schedule, the project was originally supposed to be complete in July 1988.

Hilz raised several allegations about safety:

- He said the reactor containment structure, which is below ground, might permit radioactive contamination of the ground water.

Hilz said the structure is "sitting on a natural water spring we discovered when we were excavating. It wasn't on the soils report. We asked UT what to do, and they said just pour it full of concrete and stop it from leaking."

UT spokesmen said there is no way contaminated water could escape the concrete-lined facility to enter the ground water.

Joe Gilliland, spokesman for the NRC, said the agency's project manager "was unaware of that." Whether it is a safety problem "depends on whether there's a credible pathway for radioactive material to reach the ground water," and the NRC hasn't done that analysis yet, Gilliland said.

- Hilz said the aluminum reactor containment vessel was damaged on receipt, was further damaged during watertight testing and may be unsound.

Hilz said the vessel arrived at the site "like a dented can" with indentations "as big as a watermelon." He said UT brought in General Atomics, the firm that supplied the vessel, to work on the problem.

However, Hilz said, the vessel was further damaged when UT officials insisted on testing for leaks by filling the 28-foot-tall, 20-foot-around cylinder with water instead of using liquid gas as required by the contract specifications.

"I said no way, it won't hold," Hilz said, pointing out that the vessel, which ultimately would be surrounded by a heavy shield of poured concrete, at that time was held in place only by three bolts. The test was conducted over his objection, Hilz said.

When the vessel was filled with water "within two feet of the top, the (support) system blows, and the tank stretches out of round. Now it has a huge bulge in it," Hilz recalled. "So they were stuck with trying to fix it. It's made with welded seams all stressed beyond any stress they should ever be put under."

Wehring said that despite the problems, the vessel is safe. "It's inherently safe. It really doesn't depend on the integrity of the vessel. If the vessel leaks, we just shut the reactor down," he said.

Any water that escaped would be contained within the concrete structure and the normal levels of radiation in the water would dissipate quickly, most of it within a minute, Wehring said.

"A leak is no problem unless the (uranium) fuel has some problem, but that's highly unlikely," Wehring said.

Gilliland added that the NRC has agreed with UT's analysis that "if there was a catastrophe and all the water drained out of that tank and the fuel was left in the tank, the fuel would not melt down."

- Hilz also claims that there is a design flaw in the reactor that could possibly permit contaminated water to enter the city's sewer system or back up into the university's chilled water system that services the teaching lab.

Hilz said he learned of the design problem last week from Bob Pender, head of the construction firm now finishing the job. Pender would not return telephone calls.

Because of the problem, Hilz charged, "There's a very strong possibility that contaminated water could back up through the sanitary sewer, just like having your plumbing back up in your house."

Moreover, he contended, contaminated water from the reactor vessel — when circulated through a "heat exchanger" that pipes in chilled water to cool it — could enter the university's chilled water system if the heat exchanger fails.

But Michael Krause, senior operator at the reactor, said neither problem could happen.

The containment vessel isn't connected to the sewer system, Krause said. The highly purified water in it is designed to stay there for 30 years "unless we drain it for maintenance. And then we would have to bring in storage tanks and drain into those. The only way it could get into the sewer would be if the tank overflowed on the floor and ran out the building and got into the drains."

Krause also said the water in the university's chilled water system is at a greater water pressure — 65 pounds per square inch, compared to 40 — than the water being circulated from the reactor through the heat exchanger. "So if there's a leak, it would flow back into the tank, not out into the system."

Gilliland also said the pressure differential should prevent any such problem, but said "that differential is something NRC is still analyzing on this project."

UT reactor draws safety questions

Former contractor's charges denied

By Bill Collier
American-Statesman Staff

University of Texas officials moved quickly Thursday to blunt concerns about a small nuclear reactor being built at UT's Balcones Research Center after the former contractor charged the facility is unsafe.

Spokesmen for the university denied the contractor's charges that contaminated water from the reactor could enter the city's water and sewer lines or the ground water supply as well as his contention that the reactor containment vessel is unsound.

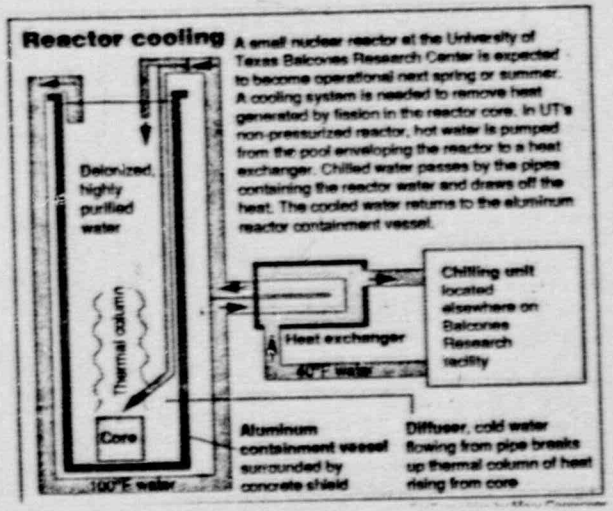
"Categorically, it will be a safe facility when it becomes licensed and operational," said Charles Franklin, UT's vice president for business affairs. "We would not do anything otherwise."

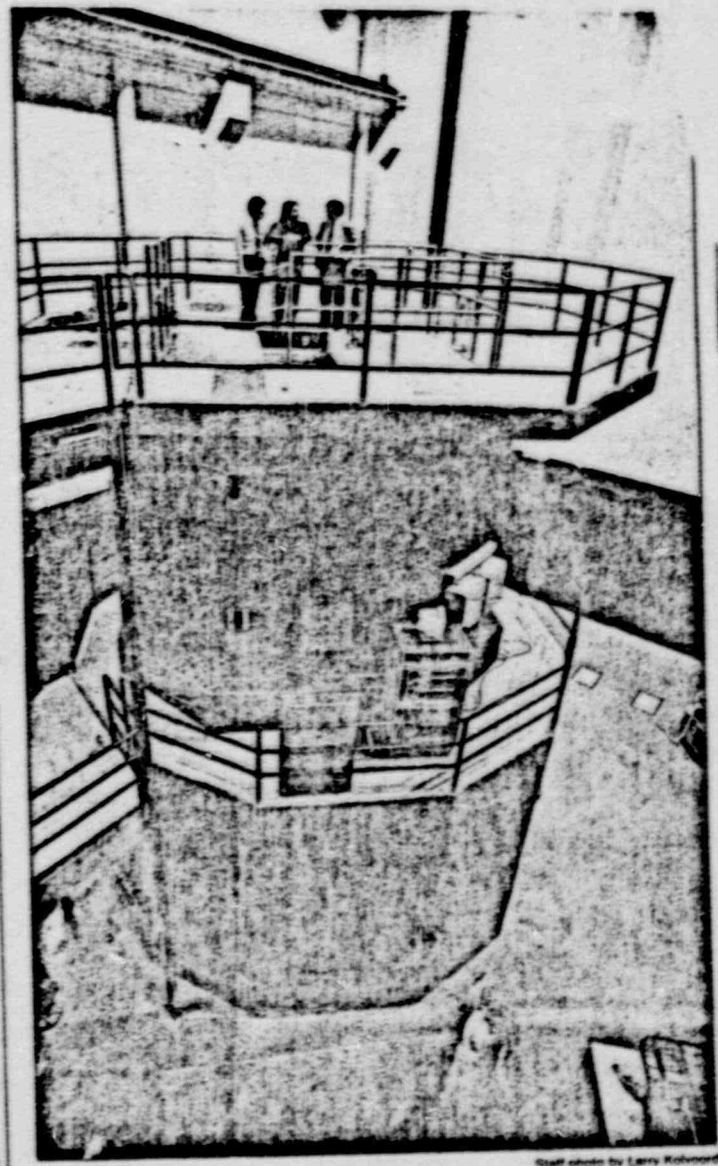
A spokesman for the Nuclear Regulatory Commission said an operating license will not be issued until every aspect of the reactor's construction and operating plans has been thoroughly reviewed for safety. The reactor is not expected to become operational until next spring or summer.

Greg Hilz, president of Construction Incorporated of Texas, the original general contractor, said the project "is just inundated with problems — design problems, management problems."

The $6 million facility, called the Nuclear Engineering Teaching Laboratory, is nearing completion at the research center south of Braker Lane between MoPac Boulevard (Loop 1) and Burnet Road in

See UT, A8





Staff photo by Larry Kolvoord

Senior operator Michael Krause, left, stands atop the reactor at Balcones Research Center, and Dr. Bernard Wehring, director of the teaching lab.

Tough defense helps No. 6 Lady Longhorns stifle Ohio State 82-52 / SPORTS, F1

Friday
December 15, 1989
35 cents
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Austin American-Statesman

Weather
Partly cloudy. High, mid-40s. Low, low to mid-20s. North wind 15 to 25 mph and gusty. Details, A20