

Three Mile Island Alert

# Island Updates

News Watch on the Harrisburg Area

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The Patriot, Harrisburg, Pa., Thursday, July 10, 1986

## Unit 1 foes attack GPU, Rickover tie

By Frank Lynch  
Patriot-News

Opponents of Three Mile Island Unit 1's restart want an investigation into an arrangement in which General Public Utilities Corp. paid \$380,000 for a report that recommended restart.

The November 1983 report, written by Adm. Hyman G. Rickover and generally praising Unit 1's management, was a major component of GPU's successful 6½-year campaign for permission to restart the undamaged reactor.

The Washington Post reported yesterday that GPU made monthly payments to the Hyman G. Rickover Foundation after Rickover agreed to study the ability of a GPU subsidiary, GPU Nuclear Corp., to run Unit 1. Payments made during 2½ years totaled \$380,000, GPU confirmed yesterday.

The Post story also quoted the admiral's son, Robert M. Rickover of Toronto, as saying his father suffered "rapidly developing clinical senility" when he was asked to assess TMI management in 1983. The admiral died Tuesday at age 86.

Robert Rickover was unavailable for further comment yesterday.

"I find it absolutely astonishing. I'm appalled that they would so flagrantly buy his support," said Elynn Weiss, general counsel for the Union of Concerned Scientists, an intervenor in the TMI Unit 1 restart case. "How much more flagrant could it be?"

Joanne Doroshov, an attorney with Ralph Nader's Center for the Study of Responsive Law, in Washington, who also represents the anti-nuclear group Three Mile Island Alert, said, "They knew what Rickover's conclusion was going to be. I think it requires a criminal investigation."

GPU Chairman William G. Kuhns, who asked Rickover to write the report, said the remark about Rickover senility "is an outrageous statement. He didn't appear senile to us. He did occasionally have short lapses in memory."

Based on his meeting with Rickover during a tour of the plant in 1983, and on his report, Kuhns said, "These were not the actions, conclusions or recommendations of a senile old man. They simply weren't."

Kuhns also said he did not know in advance what Rickover would conclude about plant management: "Absolutely not. Anybody who knows Adm. Rickover would chuckle at that, really. In his fine and distinguished career he proved that he couldn't be compromised."

Kuhns added that he gambled in asking for Rickover's observations: "I had a lot of people tell me



Hyman G. Rickover  
"He didn't pull any punches"

"He didn't appear senile to us. He did occasionally have short lapses in memory."

—GPU Chairman Kuhns

I was crazy to do this because he is such a critical fellow; he didn't pull any punches."

Spokesmen for the foundation, now called the Center for Excellence in Education, in Leesburg, Va., were unavailable for comment yesterday.

The U.S. Nuclear Regulatory Commission cited Rickover's report in its May 1985 decision allowing the restart. After court appeals, Unit 1 was restarted last October and is now operating at full power.

Rickover's son said he disclosed terms of the agreement with GPU to "clarify" his father's views on the dangers of nuclear energy and weaponry. The Post account said,

"Some time after his retirement, and with signs of his rapidly developing clinical senility becoming clearly evident, he fell under the influence of someone... who convinced him that by agreeing to support the restart of the Three Mile Island nuclear power plant he would regain some of his lost prestige," the younger Rickover told the newspaper.

GPU spokesman Gary Plummer said monthly payments of \$25,000 were given to the foundation between September 1983, when the report was commissioned, and September 1984. Plummer said several \$5,000 payments were made between October 1984 and March.

Plummer said the safety assessment was requested by Kuhns, but that the foundation contributions were Rickover's idea.

When GPU announced that Rickover consented to do the study, company officials refused to disclose financial terms of the agreement. Kuhns said yesterday, "There was nothing sinister about that. We just don't publish all consulting arrangements we enter into routinely."

News of the arrangement has incensed parties to the TMI restart hearings.

Weiss said Robert Pollard, the union's nuclear engineering expert who served in Rickover's nuclear Navy, "always had the greatest respect for Adm. Rickover."

"But the man was senile, everybody knew that [by 1983]. It was our assumption when the thing came out, that he had nothing to do with it. We thought it was sad. The man was past it. Now it turns out it was worse than we thought."

"It just gives a lie to all these claims that there's a new GPU," Weiss said, adding, "\$25,000 per month tied to the restart? How flagrant can you get?"

Doroshov said TMI Alert may pursue legal action. "The only avenue we have open to us is to ask the NRC to suspend the license again. I think the Justice Department should look into it. The [state] Public Utility Commission should investigate. Who paid for this? The ratepayers?"

"The NRC, if they were doing their job, would take their own investigatory action," Doroshov said.

But in Washington, NRC spokesman Frank Ingram said he did not know of any response the NRC should make.

Doroshov said GPU "used this report to convince elected officials. We knew it was a white-wash, but because of Rickover's name it was difficult to show that."

She said the governor should be "taking the lead on this."

Roland Page, spokesman for Gov. Dick Thornburgh, said, "It was well known at the time that the admiral was being paid by GPU to do this."

He added, "There was nothing we ever did during the restart proceedings that was influenced by Adm. Rickover's report. It had no impact on us."

The Patriot, Harrisburg, Pa., Thursday, July 10, 1986

## Rickover's report gave restart push

By Mick Rood  
Washington Bureau

WASHINGTON — Retired Adm. Hyman G. Rickover's November 1983 report endorsing GPU Nuclear Corp. was cited as favorable evidence in the decision to restart Three Mile Island's Unit 1 reactor.

In its order of May 29, 1985, a 4-1 majority of the U.S. Nuclear Regulatory Commission defined the central restart question:

"The issue before the commission is not whether GPU Nuclear has made mistakes, but whether GPU Nuclear as presently constituted and staffed has the necessary integrity to provide reasonable assurance that it will safely operate TMI-1. The commission finds that it has."

In that regard, the commission spoke of the company's "willing-

ness to seek the views of independent evaluators."

The NRC noted that GPU Nuclear contracted for four outside evaluations, including Rickover's report. All the reports were "generally favorable to the licensee," the commission majority said in the order.

The Rickover report concluded that GPU Nuclear had "the management competence and integrity to safely operate TMI-1."

Rickover also did an April 1984 follow-up report in which he concluded GPU Nuclear should be allowed to run Unit 1 "without delay." It was restarted last Oct. 3.

The original Rickover report was released at a crucial time for GPU Nuclear. The company's predecessor, Metropolitan Edison Co., had just been indicted on charges of criminal misconduct for leak rate falsification at Unit 2 prior to the 1979 accident.

In a few days, the company was to appear before the NRC to explain improvements it had made to merit the restart of Unit 1, which was down for refueling when the Unit 2 accident occurred, and was kept out of operation afterward.

The Patriot, Harrisburg, Pa., Saturday, April 12, 1986

## Cracks found in TMI-1 generator nozzles

GPU Nuclear Corp. has discovered hairline cracks in welds holding several of the 12 nozzles that direct emergency feedwater into the two steam generators at Three Mile Island Unit 1.

Repairs are under way at the Londonderry Twp. nuclear facility, but the extent and causes of weld cracks has not yet been determined, GPU Nuclear spokesman Gordon Tomb said yesterday.

The cracks were found this week, Tomb and Nuclear Regulatory Commission inspector Randy Blough confirmed. Blough said the NRC has a specialist on site to determine the significance of the flaws and assess the adequacy of repairs, which consist of grinding out the weld cracks.

Unit 1 was taken out of service March 21, primarily to test for another potential defect in the steam generator system — cracks that have turned up periodically in the 31,000 tubes in the generators.



# TMI law action set by county

## Emission curb would be aim

By Frank Lynch  
Patriot-News

Dauphin County commissioners say they will decide next week whether to consider a law designed to control radioactive emissions from the Three Mile Island nuclear power plant.

Commissioner Lawrence J. Hochendoner supports passage of a "clean-air ordinance" that would limit the amount of radioactivity the plant may release, and impose fines if those limits are exceeded.

The county also would have the legal right to shut down the Londonderry Twp. plant if TMI operator GPU Nuclear Corp. failed to abide by terms of the law, Hochendoner said.

Hochendoner brought up the proposed law at a commissioners' meeting yesterday. Commission Chairman Frederick S. Rice said he wants another week to study the proposal.

The commissioners in 1983 appointed a task force to study the feasibility of a clean-air law. The group in 1984 voted 5-4 against adopting such a law, and the commissioners, by a 2-1 vote, went along with that recommendation.

Minority members of the task force, however, drafted a proposed clean-air law. Hochendoner said he plans to submit that proposal for approval by the commissioners next week.

The law would be enacted only if the county received funding to hire a person to monitor radioactive releases and install a more complete radiation monitoring system around the plant, he said.

Hochendoner suggests that the money could come from the TMI Public Health Fund, which was established in 1981 with \$5 million paid by TMI insurers to settle litigation against the company after the March 1979 accident at the Unit 2 reactor. With interest built over the years, the fund balance now is \$6.8 million, and the money must be committed to projects by November.

"This [law] is important to assure the people that their health is intact, that they're not being invaded by radiation," Hochendoner said.

TMI spokesman Douglas H. Bedell said, "We don't have a copy of the [proposed] ordinance, and we can't comment on something we haven't seen."

He noted that plant emissions already are closely monitored by the utility and state and federal agencies.

## MY VIEW one reader's opinion

LAWRENCE HOCHENDONER



Lawrence J. Hochendoner is minority member of the Dauphin County Board of Commissioners.

# Monitoring TMI is county concern

THE PROPOSED Dauphin County Clean Air Ordinance is more important now that it was when originally suggested in 1984. This is true for any number of reasons:

1. Former commissioners have delayed taking action on this issue for several years. Now we are facing the deadline on using TMI Health Funds for a comprehensive, state-of-the-art monitoring system.

2. While TMI is the most heavily monitored of nuclear plants, this does not mean that it is the best monitored. There is a heavy body of scientific evidence which suggests that the current monitoring is not adequate, accurate, nor does it provide reasonable assurances and guarantees for public and environmental health.

3. Just as in 1984, today Dauphin County will not incur any attorneys' fees. Our community is fortunate to have a commitment, both orally and in writing, from a prestigious group of attorneys who are willing to volunteer their legal time should any challenge occur. These are the same attorneys who successfully won the much-publicized Karen Silkwood case.

4. Unlike 1984, Dauphin County would not be setting an unprecedented action by enacting an ordinance today. The reason is that a small, rural township in Western Pennsylvania (Parks Township, Armstrong County) used our 1984 proposal as a model for setting its own Clean Air Ordinance.

5. In 1984, Unit One was not operating; it is now.

All the more reason with trips and shutdowns, radiation releases and steam generator difficulties at Unit One, and technological and biological obstacles to the Unit Two clean up that Dauphin County act as an advocate for its residents in providing a direct role in controlling radiation releases from the plant.

6. TODAY, at 10 a.m. in the Commissioners' Hearing Room, the Board of Commissioners will not be voting on an ordinance, rather they will take action on a resolution which would make future passage of an ordinance completely dependent and contingent upon receiving sufficient monies from the Health Fund.

These are just some of the reasons why we should not fear to tread where most have not gone. For other communities do not live daily with TMI in their backyard.

It is not only a proper function but a basic responsibility for any level of government, certainly county government, to ensure the protection of health and safety of its citizens.

One can argue whether TMI Unit One should have been opened, but one cannot argue that maximum safety is a bare necessity for the future of our families. Our community should be applauded for its leadership in asking the commissioners to take decisive action that will finally result in local control and accountability.

# County votes against monitoring TMI emissions

By Frank Lynch  
Patriot-News

Dauphin County will not police radioactive emissions from the Three Mile Island nuclear power plant.

In a 2-1 vote, commissioners yesterday decided against a clean-air ordinance in which the county

### Inside:

• TMI may use filter, pressure pump to kill reactor organisms—A15

would require radioactive gas releases from the Londonderry Twp. plant to be below certain limits.

Majority Commissioners Frederick S. Rice and Norman P. Hetrick voted against a resolution that would have supported such monitoring. Commissioner Lawrence J. Hochendoner, who has ad-

vocated the merits of the ordinance over the last few weeks, voted for it.

Hochendoner said the resolution was simply a "policy statement" favoring the county's involvement in enforcing radiation-release standards. Commissioners would not have voted on enacting such a policy until funds for an improved monitoring system were pledged by the Three Mile Island Public Health Fund.

Rice said TMI is "one of the most heavily monitored places on earth," and added he finds a clean-air ordinance "to be unsupportable either by logic or by the limited economies afforded the county government."

Hetrick said he is "all in favor of" better monitoring equipment around TMI, but doesn't think it's the county's duty to enforce emission standards. Noting that three federal and state agencies already monitor releases, the clean-air or-

**"In my opinion, with due respect to my colleagues, this constitutes an abdication of responsibility that cannot be justified."**

—Commissioner Hochendoner

dinance would have added "another layer of government," he said.

Hochendoner said he was "sorry, saddened" by the vote.

"In my opinion, with due respect to my colleagues, this constitutes an abdication of responsibility that cannot be justified," he said.

Before commissioners voted on the proposal, several citizens voiced their support.

Harrisburg City Councilman Earl F. Gohl Jr. presented a letter signed by four other council members urging adoption of the resolution.

Harrisburg attorney Eugene Dice, who in 1984 was on a Clean

Air Task Force appointed by commissioners to study the feasibility of such an ordinance, said the county probably could withstand legal challenges to the proposed ordinance.

But county Solicitor Robert Krupp questioned the county's authority to pass such an ordinance. He said he suspects state law would "pre-empt" the county's ability to enforce the law, and he wondered "whether we can single out a facility without regard to dangers [of radioactive emissions] that may exist at other facilities."

Joanne Doroshow, an attorney who with other attorneys offered the county free legal help in any

litigation arising from enactment of a clean-air law, called yesterday's vote "a travesty."

Yesterday was the second time commissioners have considered a clean-air policy. Two years ago the board voted down the idea, basing the decision on the findings of the task force, which by a 4-3 vote recommended the proposal not be enacted.

Hochendoner resurrected the clean-air ordinance about a month ago. He has said passage of the ordinance would be timely because funds for a beefed-up monitoring system around TMI could be provided by the TMI Public Health Fund.

The fund was set up in 1981 with money paid by TMI's insurance companies resulting from litigation after the March 1979 accident at Unit 2. Under terms of the agreement creating the fund, monies must be committed to public-health projects by November.

# Better TMI monitoring equipment urged

By Frank Lynch  
Patriot-News

An anti-nuclear group wants local elected officials to sound the call for improved radiation monitoring equipment around the Three Mile Island nuclear power plant in Londonderry Twp.

Joanne Doroshow, lawyer for Three Mile Island Alert, yesterday asked Dauphin County commissioners to "take the lead" in efforts to fund the equipment.

A petition she presented to the board calls for the county to administer \$600,000 from the TMI Public Health Fund for the monitors. The petition also asks for a public hearing for the fund's

administrators to "justify their handling" of the money.

Commissioners Norman P. Hetrick and Lawrence J. Hochendoner indicated they will support the petition at next week's meeting. Chairman Frederick S. Rice said he wants more time to study the proposal.

Should the county approve the petition, Doroshow said, she will ask public officials in county and municipal governments within 25 miles of the plant to endorse it. The petition then would be presented to federal Judge Sylvia Rambo for consideration.

Rambo oversees expenditures from the Public Health Fund, set up in 1981

with \$5 million paid by TMI's insurers as a result of a class-action suit after the March 1979 accident at the plant.

Money from the fund, now \$6 million with interest accrued over the years, must be committed by November, according to the 1981 agreement.

TMI Alert members have criticized the way fund administrators, Philadelphia lawyer David Berger and his son, Jonathan, have handled the money. Among other complaints, they claim there have been "incredible delays" in the allocation of funds and said the Bergers exercise "tight control of information over fund activities."

Doroshow said she will circulate the

petition among municipal officials "so the court can understand this is not a TMI Alert concern, but a community concern."

Jonathan Berger refused to discuss the petition specifically, on grounds that he has not read it. However, Berger called all of the complaints TMI Alert has made against the Bergers "preposterous."

He insisted fund money will be spent by the November deadline, and that the administrators are following a schedule of disbursements spelled out in the agreement that created the fund.

Two studies of the current TMI monitoring system — commissioned at a cost of \$800,000 — are nearly complete, and

recommendations for more equipment will be considered, he said. But Berger said it would be premature to purchase equipment before the studies are done.

"Until those studies are complete, I don't see how anyone could be in a position to buy monitoring equipment," he said. "If you do, then you have to answer charges that [new equipment] is a duplication."

TMI operator GPU Nuclear Corp. and three government agencies monitor radioactive releases from the plant.

Doroshow predicted it will take about a month before she presents the petition to other local officials.

# Judge denies county bid for TMI monitoring funds

By Frank Lynch  
Patriot-News

A request that \$600,000 be set aside for improved radiation monitoring equipment around the Three Mile Island nuclear plant is "premature," a federal judge says.

In an order issued yesterday, U.S. Middle District Court Judge Sylvia H. Rambo denied a request filed with her Monday by Dauphin County commissioners. Terming their motion "deficient," she noted that studies on the adequacy of the existing monitoring system at the plant have not been completed.

With those studies pending, "it would appear that any request at this time for the purchase of equipment is premature," she said.

Commissioners, at the urging of citizens and the anti-nuclear group TMI Alert, asked that the money be set aside from the TMI Public Health Fund only if studies show there is a need for the equip-

ment. They noted that the money must be committed to projects by November, as specified in the 1981 agreement creating the fund.

The petition also asked the judge to set a public hearing in which the activities of David Berger and his sons, who are administrators of the Health Fund, would be scrutinized.

Rambo must approve expenditures from the fund, set up in 1981 with \$5 million after an out-of-court settlement between area residents and the owners of TMI after the March 1979 accident at Unit 2. Use of the fund is to include sponsorship of studies and public awareness programs on the health effects of radiation and nuclear power.

Rambo said of the commissioners' request, "As a funding proposal, it is lacking in every respect. Certainly petitioners in their official capacities are not novices in making or reviewing funding proposals and are well aware of the detailed requirements and documentation necessary

to support such a request."

Rambo said she does not know how the \$600,000 figure was reached, who would administer the money, how much equipment is required, who would maintain it, "or, for that matter, whether additional monitoring is even necessary."

In her order, she advises commissioners to wait until monitoring studies are done. Two studies, commissioned by the fund at a cost of \$800,000, are nearly complete.

Concerning complaints about the fund administrators, the Bergers, Rambo said, "This court is not clear what relief the petitioners seek."

If the commissioners want a justification of the health studies funded to date, such requests should be directed to her, since she must approve all expenditures, she said.

Commissioner Lawrence J. Hochendoner, who had asked his fellow board members to petition the judge, said the judge is "right" on most points.

"I agree with the judge to the extent that we did not include the detail that would normally accompany such a proposal. But it was important to register with the judge that this is something important to take into account, not knowing when the studies would be forthcoming," he said. "If we had the benefit of the study we would have been more precise."

Joanne Doroshow, principal author of the motion and a former attorney for TMI Alert, said, "I don't think this is at all a bad decision."

"The most difficult legal obstacle was in getting the judge to even consider the commissioners' stance," she said. When the equipment studies are complete, she said, Rambo has left open the door for the commissioners to file an amended complaint.

"I think maybe ground has been broken with the judge," she said.

TMI Alert and Hochendoner frequently have attacked the Bergers, accusing them of dragging their feet in funding projects, of funding projects not beneficial

to the community, and of not maintaining open communication with the community. They also have said that at the Bergers' current spending pace, not all the money in the fund will be spent by the deadline. Under terms of the agreement, uncommitted money will revert to TMI owners to be spent at their discretion.

Harrisburg City Council in February approved a resolution — most of it drafted by TMI Alert members — censuring the Bergers on essentially the same counts.

The Bergers have denied the claims. Jonathan Berger said spending is "right on track" with a schedule approved by Rambo.

He noted that council adopted the resolution without hearing from the Bergers. This week he mailed to City Council a model resolution that would rescind the original, and generally praising the fund management.

He said he has asked to appear before council to defend the way the fund has been handled.

## Soviet disaster jogs thoughts of fears about TMI in 1979

By Cal Turner  
Patriot-News

Time, distance and memory. Standing in Riverfront Park you can juggle all three and think of what was and is and could have been.

The nuclear fires said to be raging near the big city of Kiev in the Soviet Union are going east or coming west, some 4,500 miles away, while 10 miles downriver is Middletown, its international notoriety symbolically linked to the four cooling towers of the nuclear power plant three miles offshore.

All the wars and horror movies make just a thin footnote to what the imagination can do with nuclear devastation. The reality of it would turn any fantasy off like a faucet.

Yesterday, Riverfront Park was sitting as pretty as ever. The oak, maple and buttonwood really had dressed up, and mustard weed and peony and grass make the banks look like high-class carpet.

Joggers, strollers, brown baggers and those who just wanted to see the water move slowly along or watch the traffic on the bridges or gaze at the spires of Marysville were out in number. There were those who just wanted

to catch the full force of the limp breeze from the west, and those who wanted to get as far away as possible from work. It was a nice day to do some deep breathing, sigh and let go.

The bad news from the Soviet Union, though, was not too easy to get away from. One step backward in memory and turn around and you get nose-to-nose with March 28, 1979, the date of the Three Mile Island accident.

Friends of nuclear power were hard to find at Riverfront Park.

Putting away a ham sandwich on the riverbank, Dr. Geoffrey Corson, a physician who lives in Dauphin, shook his head slowly when asked about his reaction to the Soviet disaster.

"I don't really know what has happened," he said. "It could be a disaster of monumental proportions, not only for the present, but for a long time. It's a warning that it could happen here. I feel very strongly that nuclear energy as a source of power has more hazards than benefits. If we reap the benefits, future generations for some 250,000 years will have to live with the waste. It will be their burden."

Heather Dickson, who lives on Derry Street, had brought her son, Scott, to the park to ride his bike.

"I'm really sorry for the people," she said. "It could happen here. I was really upset during the Three Mile Island thing. I was pregnant with Scott then, and I can remember that siren going off in Harrisburg. I was walking across the Mulberry Street Bridge then."

Julia Nace of Elizabethville and her daughter, Dawn, had finished lunch and were reading on the concrete steps leading down to the river.

"It's a terrible thing," Mrs. Nace said. "We just don't know what the truth is. Certainly, Three Mile Island has crossed my mind since that happened in Russia."

"It's scary," said daughter Dawn. "Very scary." Traffic along Front Street was its usual go, stop, start and go. Lunch hour was in full bloom. From the way it looked, the Chernobyl nuclear plant and the city of Kiev could've been light years away. Yet, all you had to do was ask...

Still huffing and puffing from jogging, Gail Drunisc, a nurse at Harrisburg Hospital, said, "Well, I lived 2 1/2 miles from Three Mile Island when the accident happened there, so this does strike a chord of remembrance. I'm cynical about nuclear power. An accident

like that could happen wherever there's a plant."

Looking out over the water as he listened to his radio, Moncy P. Smith of Harrisburg, a musician, turned off the radio and said, "I feel it was inevitable. Basically, nuclear energy is something that hasn't been understood yet. I think this country has more safeguards. But it needs more exploring."

"It's a shame the people over there haven't been told what happened," snapped Joe Lucia of Lower Paxton Twp., a state worker. "The accident maybe can't be helped, but they should let the people know. Yes, I was here when Three Mile Island happened, and I left."

Dave Oblisch of Hampden Twp., an attorney, said, "I feel sympathy for the people and anger at their government for not being forthright with them."

"I have mixed feelings about nuclear power. There is some need for it, at least temporarily, but I'm wondering if it's worth the risk."

## Soviet disaster puts TMI figure back in spotlight

By Mick Rood  
Sunday Patriot-News

WASHINGTON — There was Harold R. Denton, answering questions about a nuclear disaster again in a seemingly unflappable and reassuring way, even though, again, few of the facts were at hand.

The director of the Nuclear Regulatory Commission's Nuclear Reactor Regulation Office, Denton was an important member of a federal interagency task group formed last week to interpret the Soviet nuclear plant accident at Chernobyl.



The physicist, now 50, became a familiar national figure seven years earlier as the government's chief spokesman in the uncertain days after the Three Mile Island Unit 2 accident.

"I NEVER intended to get involved with this again," Denton said in an interview last week after briefing the national press on Chernobyl.

"I'd rather be down in North Carolina, selling shrimp for fish bait," said Denton, who spends most of his leisure time on the Outer Banks of his native state.

After a week of intense effort to gather facts on the accident, and seeing a number of familiar faces in the press corps and the federal bureaucrats around him, Denton "almost had the feeling that I was dreaming this, that it can't be happening again."

"Throughout, I have been both apprehensive and relaxed. Apprehensive because of the seriousness of the Chernobyl accident, and relaxed because I'm not the lead spokesman. Still, it's a drill I've been through before."

ALTHOUGH LEE Thomas, administrator of the Environmental Protection Agency, is the interagency task group's chief, Denton has answered about half of the questions at the group's first briefings. Most of the queries went to his area of expertise — how the Chernobyl reactor could have exploded, causing a breach in its containment.

Denton still does not know the "initiating event," but much of what apparently followed was eerily the same as at Three Mile Island. Something caused a loss-of-coolant accident. Partially unprotected by coolant water, the uranium fuel overheated, creating steam that attacked the zirconium around the fuel.

All this was followed at TMI by a partial meltdown of fuel that was apparently contained by the reactor vessel and certainly contained by the containment building. Mostly shorter-lived, less virulent fission products escaped, but nothing like that at Chernobyl. There, the melting fuel and steam set off combustible gases that reacted with graphite — not present at TMI — surrounding them. What is thought to be a lesser Soviet containment could not restrain the resulting nuclear fire.

Denton said the mix of more lethal, longer-lived radioactivity already traced in Norway suggests the kind of severe core damage at Chernobyl caused by an explosion and breach of the core. It apparently was a different version of the hydrogen bubble crisis at TMI, where officials feared there would be an explosion during the week-end after the Unit 2 accident.

WITH THE TMI accident as a backdrop, but with little data on the new accident, Denton provided few variations from this bare-boned scenario of the Chernobyl disaster.

"It's the facts, not being able to get facts in this situation. We can't respond to the same degree as we did at TMI," he said.

(Despite Denton's complaints about lack of facts from Chernobyl, considerable information indicating core damage during the TMI accident was either neglected or misinterpreted for two days after the original "transient.")

"THIS PLANT is overseas, and we are a domestic agency, you know," Denton said.

"I'm just very grateful it's not here. I thought this could only happen once in my lifetime," he said.

## Sympathetic with Soviets

# Farmers felt the impact of TMI

By Mike Klingaman  
Baltimore Evening Sun

We had a frost the weekend before last, but I kept my cool. This is abnormal. Usually during May, a sharp temperature drop drives my blood pressure up. I blunder about the yard, cursing the impending cold front, turning the vegetable garden into Tin Can Alley and bundling the magnolia the way a mother wraps a snow-bound toddler.

This time I stayed calm. I had dinner, read the newspaper, lit the woodstove and invited a few potted friends inside for the night. The front page changed my perspective. The Red Scare at Chernobyl dwarfed my concern for a few tender plants. How serious is the chance of light frost next to the threat of a nuclear winter? My land would thaw; Russian farmers may have lost theirs forever.

I grieved for that contaminated Soviet landscape and felt a twinge of *deja vu*. Baltimore is a little closer to Three Mile Island than Kiev is to Chernobyl. Seven years ago, on a sly, warm day in March, I sowed lettuce and waited for the sky to

fall. It seemed the height of garden therapy.

The Soviet meltdown rekindled that hell for those growers nearer to TMI. Throughout the summer of 1979, farmers like Ernest Retherford had difficulty peddling their produce at roadside stands outside of Harrisburg, Pa. — even though the crops were "cleared" by state and federal monitoring agencies.

Many area homeowners declined to plant gardens that year. Some of those who grew vegetables changed their minds at the table and wound up trashing their own tomatoes and cucumbers.

"It was terrible for several days until we got some reports back, but we found no evidence of any damage," says Harold Stewart, who was then the agricultural agent and extension director for Dauphin County, Pa. "Of course, everything that happened that summer — from insect problems to plant diseases — was blamed on radiation."

"As I remember, we had a problem with pear psylla, which causes a black, sooty fungus. Some

backyard growers were sure it was radiation. We got calls about lilac branches that wilted from borers. It turned out, and even houseplants. The New York Times ran a story that all the barn fires had died. It was completely false, but I had to go out and inspect them all anyway."

A dairy farmer in Lancaster County swore his cows had been tainted by the reactor leak. "We found it was malnutrition," says Stewart. "You heard wild rumors. A man called and said a fish he'd caught in the Susquehanna started to glow in the dark when he put it in his freezer. We told him to take it to the Department of Agriculture lab. It turned out to be OK. But TMI more than doubled our workload that year."

Retherford's 100-acre vegetable farm in Middletown grows some of the sweetest watermelons in the county. It also sits in the shadow of Three Mile Island, not a mile from the site. He feels a peculiar empathy with the people of Chernobyl.

"I think of the Russian people, and how the Soviet government

has been downgraded for not telling the people what was happening. And then I remember, and I feel that maybe we weren't really advised of it soon enough here," says Retherford.

"That day of the TMI accident, my wife and I were out in the field, clearing away last year's plastic mulch. It happened in the morning, but we didn't find out until late afternoon when my son came by and told us. Everyone said it was on the radio, but who has a radio in the field? Maybe I'm not smart enough to really understand it all."

The Retherfords left their farm for several days, commuting daily to tend their greenhouse plants. They were permitted to return in time to plow and plant the riverfront land they've had for the last 32 years.

Retherford is 52 now. He planted his corn last week. He has developed skin cancer, "but I'm out in the sun and you can pick that up anywhere," he says.

He may never move. The land is kind, TMI is quiet, and "real estate took a beating in the area," he says. At a recent public auction, he adds, the 48-acre farm next door sold for a price identical to what it brought "just before the accident."

"We're still not really over it," he says.

## Americans to honor Soviet firefighters

Associated Press

SCHENECTADY, N.Y. — Some American firefighters seeking to salute the courage of their Soviet counterparts killed in the Chernobyl nuclear accident will present a plaque this week to Soviet officials in memory of the six men.

"We felt that the firefighters at Chernobyl were pretty much overlooked because everybody was so upset about fallout," said Capt. Jay Campano, a firefighter for 16 years. Campano and others from

Schenectady's City Fire Fighters Union Local 28 are scheduled to present a plaque Tuesday at the Soviet mission to the United Nations in New York.

The April 26 explosion and fire at the No. 4 reactor at the power plant resulted in at least 26 deaths.

Soviet newspapers praised the heroism of the firefighters, especially Viktor Kibenok, 23, who was said to have worked for hours on the roof of the reactor to contain flames. Kibenok was the first of the firemen to die, 15 days after the accident.

## Views differ on effect on U.S. nuclear power

By Frank Lynch  
Sunday Patriot-News

Few argue that the accident at the Chernobyl nuclear power plant in the Soviet Union is a tragedy.

But opinions begin to differ when the question turns to the accident's implications for nuclear power in the United States.

Joanne Doroshow, attorney for the anti-nuclear group Three Mile Island Alert, said: "We are saddened by the tragic loss of life, injuries and emotional trauma suffered by the Soviet people."

BUT, "I think it legitimizes the position of people who have been saying nuclear power is unsafe," she said. "The nuclear plants there [in the Soviet Union] may be different, but it's still nuclear power, an inherently unsafe technology." "I don't agree with that at all. You have to put into perspective the way the Russians do business," said Earl Peters of Middletown. Peters is vice president of Friends and Family of TMI, a group that supports nuclear power.

"It's tragic, but I know from folks I've spoken to that it's common practice [in the Soviet Union] to build a reactor without a containment building. When you do that, you're asking for trouble," he said.

LISA ROBINSON, a spokeswoman for TMI operator GPU Nuclear, said the company would not comment on the Chernobyl accident.

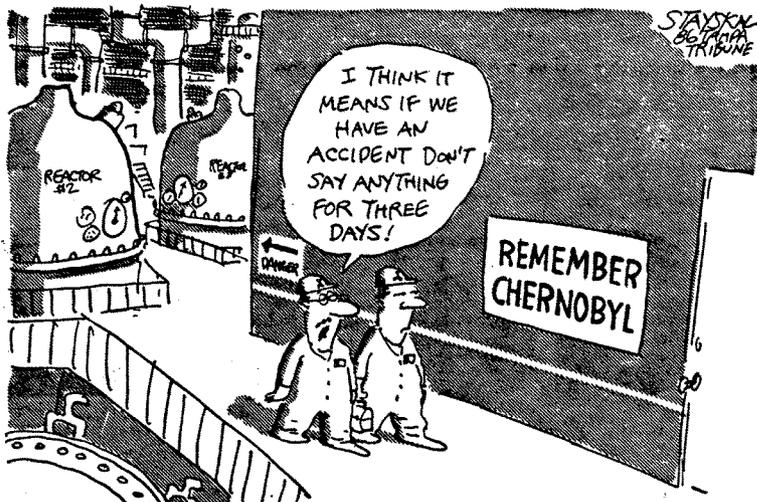
She said, "As far as TMI goes, we had a serious accident here [at Unit 2] in 1979. But it demonstrated a lot of things, the most significant is that the way they [U.S. plants] are designed is that they are designed for safety. Our containment building acted as it was designed to do."

Dauphin County Commissioner Lawrence J. Hochendoner said the Chernobyl accident shows that nuclear power is unsafe.

"I think it makes very clear that the technology is extremely dangerous, and that you can never be too safe in the precautions you take," he said. "For Dauphin County, that means we need a comprehensive monitoring system and a clean-air ordinance."

HOCHENDONER LAST month proposed that the county adopt a law requiring that radioactive emissions from TMI be below certain limits. His fellow commissioners, Norman P. Hetrick and Frederick S. Rice, voted the proposal down.

Hochendoner and TMI Alert are urging that an improved monitoring system be placed around TMI.



# 50 TMI foes mark anniversary

United Press International

"Battle weary" but unwilling to surrender, about 50 opponents of Three Mile Island gathered on the Capitol steps yesterday to mark the seventh anniversary of the nation's worst commercial nuclear power accident.

The rally was the smallest of the anniversary protests since the near-meltdown at TMI's Unit 2 nuclear reactor on the morning of March 28, 1979.

Organizers said the size of the crowd was due largely to the failed legal effort to prevent restart of the undamaged Unit 1 reactor at the Londonderry Twp. plant.

Unit 1 was restarted Oct. 3 for the first time since the accident.

"We believe the community is exhausted," Joanne Doroshow, a lawyer for

the citizens group TMI Alert Inc., said at a pre-rally news conference in the Capitol Rotunda.

"After banging their heads up against a wall for seven years, no one can blame anyone here for accepting that TMI Unit 1 is going to run, and getting on with their lives," Doroshow said.

"The March 28, 1979, accident marked the beginning of a series of events that have not yet ended," said Eric Epstein, a spokesman for TMI Alert. "People are battle weary, both physically and emotionally, but still determined."

"We are smaller this year but the danger is greater," said Ray Martin, a site protection officer at TMI at the time of the accident, and a speaker at the rally on the Capitol steps.

The Rev. Greg Harbaugh, a Lutheran

minister, said: "We're here. We're ready. We're still willing to fight. . . . The story goes on because we go on."

"The idea that the crowds are small doesn't bother me," said Robert Pollard, a nuclear engineer for the Union of Concerned Scientists, which is pushing for safety modifications at TMI and five other nuclear power plants designed by Babcock & Wilcox Co.

"The B&W plants like TMI are clearly not safe and should be shut down," Pollard said.

At the rally, a woman carried a sign reading: "The Philippines have more democracy than we do. We voted no on TMI." The sign was a reference to a 2-1 approval by local voters of a public referendum in 1982 against restart of Unit 1.

## 60 ingest radioactive substance

### Small levels found in TMI workers

By David Stellfox  
Patriot-News

About 60 TMI Unit 1 workers ingested "very small" but detectable levels of radioactive iodine during an incident at the plant Monday, a GPU Nuclear Corp. spokesman said last night.

The contamination levels found in half of the 120 workers tested ranged from 2 nanocuries (billionths of a curie) to 120 nanocuries — all fractions of federal limits, said GPU Nuclear Corp. spokesman Doug Bedell.

"The bulk of those [showing detectable concentrations] are in the order of 10 nanocuries," Bedell said.

The lowest detectable level of the radiation the "whole body count" machine can detect is 2 nanocuries, he said.

Bedell said all 120 workers given the whole body count tests are presumed to have ingested some amount of radioactive iodine when the radiation built up in the containment building Monday afternoon and night.

The workers were exposed to the iodine and radioactive xenon and krypton Monday when the gases were released from the plant's two steam generators inside the containment building. Plates were removed from the tops of the generators in preparation for planned testing.

Bedell said it will take several days to determine precisely how the contamination which the workers received relates proportionally to federal limits.

The whole-body-count machine measures in nanocuries — a quantitative measure of radioactive material — while federal limits are stated in millirem doses.

"We can't compare the nanocurie numbers to the limits stated in rem because we don't have the millirem doses [figured out]," Bedell said.

"It will take several days to work up the dose numbers for each worker," he said. Those dose numbers will vary according to the physiology of each worker and his activity in the building, Bedell said.

"We can say without any question at all that even at 120 nanocuries, the highest levels of these quantities [detected in the workers] is still a fraction of federal limits," he said.

All but essential work inside the containment building was stopped for about 12 hours Monday when the radiation buildup became apparent.

The gases were being filtered through a ventilation system for release to the environment, but Gordon Tomb, another GPU spokesman, said the gases were being pulled out of the steam generators more quickly than the ventilation system could process them.

The radiation releases to the environment were within federal limits and were not detected by radiation monitors outside the plant, according to Richard J. Conte, the Nuclear Regulatory Commission's senior on-site resident inspector.

Conte said yesterday NRC personnel are investigating the incident and overseeing the worker testing program, which GPU officials have stressed was a strictly precautionary measure.

The Patriot, Harrisburg, Pa., Saturday, May 31, 1985

## Nuclear worker injured Accident at TMI not publicly told

By Frank Lynch  
Patriot-News

A 100-pound trolley being used in the cleanup of Three Mile Island's Unit 2 reactor fell 15 feet from its track above the reactor nearly three weeks ago, struck a worker on the head and plunged into the reactor vessel water.

The worker suffered a head cut that required several stitches, but both plant operator GPU Nuclear Corp. and a Nuclear Regulatory Commission spokesman termed the May 12 accident "insignificant."

GPU Nuclear had not publicly reported the incident. The Patriot-News learned of it through a listing in the NRC's May 19 status report on the cleanup of Unit 2.

"Our position as far as reporting is that we intend to, and we do, report things of some significance to the public and the workers. This incident had zero significance as far as nuclear safety is concerned," said Gordon Tomb, a plant spokesman.

Dr. William Travers, director of the NRC's TMI-2 Cleanup Project, which prepared the status report, said his office is following GPU Nuclear's investigation of the accident and is not conducting an independent review. He said he doubted the utility would be cited for it.

"It looks as though it had something to do with a machine failure, as opposed to something that is extraordinarily wrong procedurally," Travers said.

"It was serious in the context that that person was injured. But was it serious from a radiological context? Not really," he added.

The equipment involved was a hoist-and-trolley device that moves horizontally along an I-beam. The device is one of two that workers use to manipulate long-handled tools employed in removing rubble from the reactor vessel.

Tomb said that, on the evening of May 12, a pin that kept the wheels in place fell out, causing the 100-pound trolley to disengage from the I-beam. The trolley fell and struck the worker who was standing on a work platform above the reactor. It then dropped through a slot in the platform and into the reactor water.

The 200-pound hoist mechanism separated from the trolley during the fall, but was held aloft by a chain connected to a tool, Tomb said.

The trolley was recovered from the reactor waters several days later and refitted with a bolt to replace the faulty wheel-pin, Tomb said. The second trolley was likewise modified, he said.

Tomb said the incident posed no danger to the reactor vessel, which has been determined to be able to withstand blows of thousands of pounds. "So having something about 100 pounds drop into the vessel is insignificant," he said.

The worker, who suffered a "glancing blow," was not contaminated, Tomb said. He was treated at Harrisburg Hospital for the cut, Tomb said.

Earlier in the week, The Patriot-News reported — from another NRC document detailing cleanup work — that nine fuel canisters containing the highly radioactive debris from the damaged reactor were leaking argon gas.

The gas leaks from the canisters — containing solid debris — were described by the NRC and GPU as a minor problem that could be corrected later. The canisters are being stored under water in the fuel handling area adjacent to the reactor.

Tomb said it was unlikely any radioactive particles would be released. The inert argon gas is used to remove water from the canisters.

Sunday Patriot-News, Harrisburg, Pa., April 20, 1985

## TMI citizens group alarmed by variance for faulty tubes

By Wendi Taylor  
Sunday Patriot-News

Members of Three Mile Island Alert Inc. are alarmed over a variance granted GPU Nuclear Corp. when it tested Three Mile Island's Unit No. 1 reactor for structural defects.

The testing and plugging of cracked tubes in the steam generator, completed Friday, took 25 tubes out of service. Another six tubes would have been plugged if the Nuclear Regulatory Commission had not granted GPU the variance in its regulations.

Without the variance, GPU would have been required to plug tubes with inside walls that had cracks deeper than 40 percent of their thickness.

Under the variance, GPU's margin was increased to 50 percent if the crack was less than one-fifth the circumference of the tube, GPU spokesman Doug Bedell said.

The 56-foot long metal alloy tubes are about as thick as a penny and carry highly radioactive water. When the tubes are found to be damaged beyond established standards, they are left in place and plugged at both ends.

Joanne Doroshow, a lawyer for TMI-Alert said she is worried an undetected crack could cause a tube to rupture.

"You want to avoid that at all costs," she said.

The GPU tests were required by the NRC as part of the restart agreement for the Unit 1 reactor, restarted Oct. 3. The reactor had been down before the

March 28, 1979, nuclear accident at its twin reactor, Unit 2.

"Big legal issues have been raised by [the variance]," Doroshow said.

She said that, according to the federal Atomic Energy Law, the NRC must hold a hearing before it grants any variance to an operator's license unless there is "no significant hazard consideration."

TMI-Alert contends there are safety hazards involved with the Unit 1 reactor. The citizens group has opposed any relaxation of restrictions on the plant.

Lisa Robinson, a GPU spokeswoman, said the plant was granted the "one-time variance" by the NRC on Friday.

Earlier this year, GPU Nuclear asked for a variance to keep tubes in operation that were cracked to 50 percent of their wall's thickness. At the same time, it asked for an exemption for tubes that were cracked up to 70 percent with a corresponding reduction in the length requirement, Robinson said.

The NRC found there was no significant hazard in granting the 50 percent variance "for this time around only," Robinson said.

The 40 percent rule was made in the 1970s before the sensitive equipment now available was used. "New technology gives us a better reading of what's there," Robinson said.

However, Doroshow said GPU underestimated the length of cracks in the past. "This new criteria adds to the safety problems," she said.

The Patriot, Harrisburg, Pa., Wednesday, May 26, 1985

## Radioactive canisters leak argon

By Frank Lynch  
Patriot-News

Leaks of argon gas have been found in nine fuel canisters containing the highly radioactive debris removed from the damaged Unit 2 reactor at Three Mile Island.

Curtis Cowgill, chief of the TMI-2 Projects Section for the Nuclear Regulatory Commission's Region 1, attributes the leaks to faulty metal gaskets near the top of the canisters.

The leaks were found after molten nuclear fuel from the reactor already had been sealed in the canisters, he said. The metal gaskets will be replaced with synthetic ones, he said.

Both NRC and TMI spokesmen said that because the material in the casks is solid, there was little chance radioactive particles would escape.

"It clearly is something they had to fix, but I don't think it's a big deal," Cowgill said yesterday.

Gordon Tomb, spokesman for plant operator GPU Nuclear Corp., said 34 canisters loaded after the leaks were detected have been fitted with the synthetic gaskets and do not leak.

He said he didn't know when the leaky vessels would be fixed.

Plant personnel first noticed the leaks "in January or February, when we first began capping," Tomb said.

Although the leaks were found while the canisters still were inside the reactor being loaded with rubble, he said the canisters were transferred to a fuel pool in the adjacent fuel handling building "knowing we would correct it, once we determined [the] solution to it."

Asked why the problem hadn't been publicly reported, Tomb said "it's not a major problem. But it's something that needs to be dealt with."

The problem was noticed when argon, an inert gas used in removing water from the canisters, began seeping from the drums. Workers first tried tightening the canister caps, then decided to replace the gaskets, Tomb said.

He said workers will take the caps off canisters with metal gaskets, put a temporary metal cover over to minimize waste leakage to the fuel pool water, replace the gasket and put back the heads.

The NRC, in a letter to GPU Nuclear, approved the procedure. But the NRC wants assurances that wastes leaking from the canisters into the spent fuel pool "can be properly disposed of," the letter said.

The March 1979 accident at Unit 2 of the Londonderry Twp. nuclear plant melted nuclear fuel

and reactor core parts. Cleanup personnel working 20 feet above the water-covered reactor rubble use long-handled tools to scoop the debris into the canisters.

Defueling began in November, and to date workers have filled 42 of the canisters with 25 tons of core debris — 16 percent of the estimated 154 tons of rubble in the reactor vessel.

GPU Nuclear ordered 250 canisters at a cost of \$4.3 million, or about \$17,200 a drum.

The canisters will be loaded into two shipping casks, which will be shipped by rail to a government research lab in Idaho for study and disposal. The first shipment from TMI is planned in July.

Meanwhile, after a month-long delay cleanup workers have resumed removal of the fuel and debris.

Colonies of microorganisms had clouded reactor water, reducing workers' visibility to several inches and prompting plant officials to halt defueling April 21.

Plant spokesman Gordon Tomb said visibility in the reactor water had improved enough to allow defueling to begin again Friday night. Defueling work also was done Sunday and yesterday.

Early this month officials successfully used a combination of hydrogen peroxide, a high-pressure pump and a swimming pool filter to kill the organisms. Tomb said visibility has improved from several inches to more than a foot.

The Patriot, Harrisburg, Pa., Friday, May 23, 1985

## State agency to rule on portion of TMI cancer claim

By Mary Warner  
Patriot-News

A judge has refused to dismiss a suit filed by the family of a Three Mile Island worker who died of cancer.

But he sent part of the case to the state Bureau of Workers' Compensation.

Senior Dauphin County Judge William W. Lipsitt yesterday denied motions for summary judgment by Metropolitan Edison Co., which employed James Rogers in the cleanup following the 1979 accident at the nuclear plant, and by seven other defendants.

However, the judge agreed with Met-Ed attorney James Sweet that the claim against the utility should have been filed with the Workers' Compensation Board, from which compensation is significantly lower than a potential jury award.

The motions Lipsitt decided yesterday turned on legal

points rather than the central issue of the suit: whether radiation exposure suffered by Rogers in October 1979 during an accident in a contaminated area caused his cancer.

The judge ordered a halt to all proceedings in the suit until the board has ruled whether the case against Met-Ed is covered by workers' compensation laws. Sweet had argued it was; Louis Tarasi, attorney for the Rogers' estate, argued it wasn't.

If the board decides it has jurisdiction, the judge ruled, the court case against Met-Ed is ended. That's because employers are immune from suits for injuries covered by workers' compensation.

If not, the case could proceed to a trial of Met-Ed and the other defendants.

Those other defendants — including General Public Utilities Corp., owner of the Londonderry Twp. nuclear plant, and related companies — had argued they had nothing

to do with any injury to Rogers. But the judge said that's an issue for a jury to decide.

"The necessity of mopping up after a nuclear accident was foreseeable by all defendants," the judge wrote.

All the defendants deny the disease was caused by radiation.

According to the suit, Rogers was using a harness and pulley to work in the contaminated Unit 2 reactor on Oct. 15, 1979, when the harness became tangled and the pulley failed to work properly. He was unable to leave the contaminated area "for a considerable length of time" beyond his radiation exposure limit, the suit said.

Three months later, he was diagnosed as having leukemia. He died in July 1982 at age 36, leaving a 5-year-old son and a 7-year-old daughter.

The suit was filed by Hyland Rogers of Marietta, Rogers' mother and executor of his estate.

# Supreme Court rejects request for TMI hearings

By Frank Lynch  
Patriot-News

The U.S. Supreme Court again has refused to consider a request for more hearings on the health effects of the 1979 accident at Three Mile Island.

The high court Monday rejected for the second time an appeal by Norman and Marjorie Aamodt. The Aamodts, who live in Lake Placid, N.Y., have argued the continued operation of TMI-1 should be contingent on full scrutiny of the health effects of the March 28, 1979, accident at TMI Unit 2.

The decision could be the last legal

attempt to halt operation of the Unit 1 reactor. The Aamodts were the last party fighting in court to close the plant.

Two months ago, the U.S. 3rd Circuit Court of Appeals refused to revoke the operating license of TMI operator GPU Nuclear Corp. The attorney for the anti-nuclear group TMI Alert, which was among those filing the claim, said at the time, "This ends [our] litigation to get the plant shut down."

Marjorie Aamodt yesterday said, "I don't know what we will do. I don't know what else can be done. Right now we are just writing thank-you notes to the large number of people who have supported our

position."

Plant spokesman Lisa Robinson said only, "We think it's an appropriate ruling." She said Unit 1 was running at 100 percent power.

Last summer the Aamodts, who lived in Coatesville at the time of the accident at the Londonderry Twp. plant, asked the circuit court to block the restart of Unit 1. The appeal was denied, clearing the way for the Oct. 3 restart.

The Aamodts then asked the Supreme Court for relief, but the court on March 24 refused to hear the request.

In their May 2 bid for another consideration, the Aamodts said they had new

evidence of adverse health effects. They also charged that the Nuclear Regulatory Commission and former plant operator Metropolitan Edison Co. "knowingly made false statements" to the court in response to the couple's original claims.

Specifically, the Aamodts claimed the NRC and Met-Ed said hearings on the health effects of the accident were unnecessary, supporting their case with a health study released in September by the state Health Department. The department concluded the accident resulted in no significant health effects to area residents.

But the study was flawed, the Aamodts charged, and those parties knew

it was flawed.

"We were quite shocked at this decision because the NRC lied and [Met-Ed] lied, and they did it knowingly," Mrs. Aamodt said. "All things are not fair, that's all I can say."

She said she and her husband will seek to publish their 1984 study that found above-normal numbers of cancers and deaths in some West Shore communities.

She also said the couple is considering filing civil suits against parties who have "denigrated" them in the last few years. "We've been denigrated all over the nation" for their stance on the health effects of the TMI-2 accident, she said.

The Patriot, Harrisburg, Pa., Wednesday, March 26, 1986

## 100 undergo tests in TMI gas buildup

About 100 workers at Three Mile Island Unit 1 were being checked last night for internal exposure to radiation after a buildup of radioactive gases in the unit's containment building.

Gordon Tomb, a spokesman for plant operator GPU Nuclear Corp., said it was unclear what radiation doses workers received from the gases, but "indications are that internal exposure will be a small fraction of the federal limits."

In an unrelated incident Monday, five workers were slightly contaminated while working inside Unit 1, Tomb said. "It was skin contamination of the kind we deal with from time to time," he said.

In the gas buildup incident, levels of radioactive iodine, xenon and krypton rose in the containment building after plates on the tops of the plant's two steam generators were removed so testing could begin, Tomb said.

Doug Bedell, another GPU Nuclear spokesman, said no emergency was declared and work in the building was stopped as a precaution. "It wasn't a case of extremely high levels that would have required an evacuation," he said.

Work inside the containment building, which houses the reactor and its two steam generators, was halted between midnight Monday and noon yesterday. By noon the excess gases had passed through a series of filters and outside to the environment, he said.

Richard Conte, the Nuclear Regulatory Commission's senior on-site inspector, said the releases were within federal limits. Bedell added the releases were not detected by monitors set around the outside of the Londonderry Twp. plant.

Workers removed covers on the unit's two steam generators Monday afternoon and the gas buildup became apparent by Monday evening. Tomb said the buildup occurred because "the gases were being released faster than the ventilation system could handle."

The releases came from the primary, or nuclear, side of the system. "The workers could have continued working," Tomb stressed.

Work could have continued inside the building if workers used respirators to guard against internal exposure, the chief threat of which was iodine, Conte said. When inhaled, iodine can concentrate in the thyroid.

In the skin-contamination incident Monday, Tomb said a routine check for radiation revealed five plant employees had been slightly contaminated.

Preliminary tests showed that the five did not receive exposures to radiation above limits set by the NRC, Conte said.

Tomb said two of the employees were working at the top of steam generators when they reached into a pool of contaminated water, which slopped over the top of their protective gloves.

TMI Unit 1 was closed over the weekend for a series of tests on steam generator tubes, which were repaired several years ago after they were inadvertently contaminated by sulfur. The outage is expected to last about six weeks.

An unusual event was declared at the plant early Saturday morning when a relief valve released radioactive gas inside the plant. A small amount of gas escaped into the atmosphere.

The Patriot, Harrisburg, Pa., Thursday, June 19, 1986

## 2 violations found at TMI-1 by agency

The U.S. Nuclear Regulatory Commission has accused Three Mile Island's operating company of allowing a buildup of radioactive iodine in the Unit 1 reactor building in March.

The NRC, in a TMI-1 inspection report issued June 6, also said GPU Nuclear Corp. failed to properly post a radiation area.

Karl Abraham, spokesman for the NRC's Region 1, said both notices are classified as Category 4. The NRC rates violations on a 1-to-5 scale, with 1 being the most severe and 5 being the least severe. He said the utility probably would not be fined.

The company has 30 days in which to respond to the two violation notices.

TMI spokeswoman Lisa Robinson said the company has installed improved iodine filters in the reactor building that will allow workers to sample air at a faster pace. She also said workers have been counseled on ways to improve communication with each other.

But she said the incident did not pose a health risk to workers: "Nobody was exposed to anything that was significant."

The inspection report refers to a March 24 incident in which levels of radioactive gases, mostly iodine, were allowed to concentrate in the reactor building. Officials said 126 people, including an NRC inspector, were checked for expo-

sure. TMI spokesmen said 60 workers showed "very small" but detectable levels of radioactive iodine. Readings on the 60 ranged from 8 nanocuries (billionths of a curie) to 120 nanocuries — all fractions of federal limits.

Readings on the other 66 were too small to be detected, company spokesmen said.

The gas buildup occurred during a planned plant outage to test Unit 1's steam generators.

After workers removed a cover from the unit's steam generators, gases from the reactor system built up faster than the building's ventilation system could handle. All but essential entries into the building were suspended from midnight March 24 to noon March 25.

Regarding the second violation, the NRC said the company failed to post a sign indicating an area where radioactive materials are used or handled. Robinson said the area is a machine shop and the NRC noticed the violation April 1.

Robinson said signs were posted, but double doors to the shop were opened and the signs could not be seen. If the signs cannot be viewed, regulations require that a technician stand by.

Robinson said the technician left his post "for two minutes," during which time the NRC inspector noted he was not there.

The Patriot, Harrisburg, Pa., Monday, June 23, 1986

## Drilling of bad TMI reactor core planned

By Frank Lynch  
Patriot-News

A procedure set to begin late this week will provide the first look at the inside of the accident-damaged nuclear core of Three Mile Island Unit 2.

Trained cleanup workers will use drills and specially designed equipment to conduct the "core boring."

The process, expected to last four or five weeks, will give nuclear researchers more information about what happens to molten nuclear fuel.

It also will give plant operator GPU Nuclear Corp. more information about the composition of the rubble, and what tools will be needed to remove it from the crippled reactor.

About \$1 billion is being spent on cleanup of Unit 2 in Londonderry Twp., which was damaged in the March 28, 1979, accident.

"We'll have to see what kind of data it produces, how useful it is. But potentially, it will be a very big help," GPU Nuclear spokesman Gordon Tomb said.

Tomb said GPU Nuclear workers recently

### Inside:

• TMI worker's hearing slated—A8

completed several weeks of training to conduct the core boring. A drilling rig set up for practice in the Unit 2 turbine building is being moved atop the reactor. Borings should begin later this week, he said.

The drill will enable workers to obtain samples of the core measuring 3 inches in diameter.

Dr. William Travers, director of the Unit 2 cleanup project for the Nuclear Regulatory Commission, said samples will be taken from the top to the bottom of the rubble, estimated to be about 6 feet high.

Studies of the samples will provide "valuable" information on what happened during the accident, and what happens when nuclear fuel melts, he said.

The samples will be packed into canisters and sent along with other core debris to a government research laboratory in Idaho. Shipments are planned to begin next month. The

core-boring process is being funded by the U.S. Department of Energy.

Tomb said core cleanup work will resume after the borings. So far, workers have filled 43 canisters with 25 tons of rubble. About 125 tons remain. GPU Nuclear officials have said the cleanup project will be completed in 1988.

Meanwhile, GPU Nuclear announced that new tools and procedures have been introduced to cleanup workers to help them handle radioactive debris that falls on a work platform above the reactor.

The measures were taken, Tomb said, because twice last week technicians wearing protective gloves picked up debris particles on the platform and dropped them back into the reactor vessel.

On June 15, a piece of debris was picked up without a technician obtaining an accurate measurement of its radiation level. Two days later, a piece of debris was picked up after an accurate reading was obtained.

Both times, GPU Nuclear says, radiation doses received by the two technicians who briefly handled the particles showed the doses were minimal and of no danger to the workers.

The Patriot, Harrisburg, Pa., Wednesday, July 2, 1986

## TMI to begin shipping core debris to Idaho

By Frank Lynch  
Patriot-News

Pieces of Three Mile Island's Unit 2 nuclear core, damaged in the March 1979 accident, will be shipped to an Idaho research laboratory beginning this month.

At a news conference yesterday on the island, TMI and U.S. Department of Energy officials displayed one of two dumbbell-shaped casks that will transport 150 tons of core material, and outlined the shipping program that will last at least two years.

For security reasons officials yesterday would not disclose the date of the first shipment, which they called an important milestone in the cleanup of the accident.

Removal of damaged core parts from the island "is at the heart of the cleanup program," said Philip R. Clark, president and chief executive officer of TMI operator GPU Nuclear. He said the first shipment will be "a convincing demonstration that the entire process of cleanup can and will be done safely and on schedule."

Delbert F. Bunch, deputy assistant DOE secretary for reactor deployment, said the

shipments mark "a big step" for the department.

"Shipment of the core materials to a DOE laboratory where they can be examined and prepared for disposal is a key step in the DOE program at TMI-2," said Bunch. "The TMI-2 program has already provided valuable information to the United States and the world on accident prevention, control and improved reactor design."

Another milestone in the cleanup, expected to last through 1988 and cost \$1 billion, occurred in November when Unit 2 workers began loading reactor debris into specially made, 12-foot-long canisters. To date, 43 canisters have been filled, and they are being stored underwater in the fuel handling building adjacent to the reactor building.

Officials said yesterday that canisters already have been loaded into one shipping cask. The other will be loaded after the first is on its 1,600-mile, 10-state trip to Idaho.

Each cask carries seven canisters and will weigh 90 tons when fully loaded. At least 40 trips will be made between TMI and the Idaho National Engineering Laboratory, where the debris will be studied and ulti-

mately disposed of.

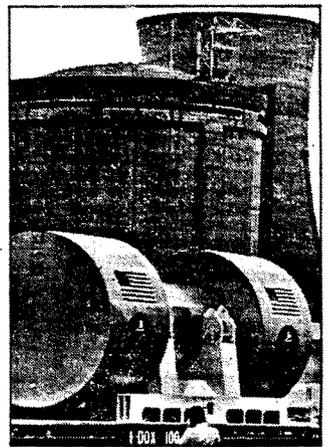
Willis Bixby, TMI program manager for DOE, said shipment of the highly radioactive material across the country will be safe.

The casks have been tested to withstand accident conditions, he said, and less than 4 millirems an hour of radioactivity will be able to be detected six feet away from the cask. The Nuclear Regulatory Commission requires that radioactivity readings not exceed 20 millirems an hour at a distance of six feet.

Troy E. Wade of DOE said, "In my view, this will be much less hazardous than the kind of things that are routinely shipped by rail. I'd be more concerned about it falling off and crushing somebody. I'm not concerned about radiation."

Conrail will carry the shipping casks from TMI to St. Louis. There they will be picked up by Union Pacific for the last leg to Idaho. The railroads will be responsible for security, Wade said, but DOE will constantly monitor the progress of the journeys.

When the first cask leaves the island later this month, Wade said an emergency preparedness official in each state along the train route will be notified.



Casks for TMI debris on display

# "ISLAND UPDATES"

THREE MILE ISLAND ALERT  
315 Peffer Street  
Harrisburg, PA 17102

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From: Updates Editor

Due to lack of funding, we regret to inform you that Island Updates will no longer be published on a regular basis.

TMIA will publish future Updates as money allows. TMIA continues to operate a full-time office and work on the following issues: radiological monitoring; Unit 2 clean-up as well as Unit 1 (court case still pending); health concerns; emergency planning; and public information and education.

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## the FORUM

*The Patriot, Harrisburg, Pa., Thursday, April 10.*

### 'Clean Air' vote ahead

#### EDITOR:

The Dauphin County Commissioners will consider whether or not to enact a law enabling the county to set standards limiting the amount of radioactive emissions that could be released from Three Mile Island. The county would be empowered to take action against the utility if those standards were exceeded. Local governments were given this authority in 1977 when Congress passed the Clean Air Act Amendments.

The proposed clean-air ordinance will be submitted for approval by Commissioner Hochendoner this week. The ordinance requires the installation of a more complete radiation monitoring system at TMI. Funding for equipment and personnel is available. One source is the TMI Public Health Fund. (The Health Fund was created in 1981 to administer the \$5 million settlement paid by insurers of TMI for damages caused by the 1979 accident. The fund is to serve citizens living within 25 miles of TMI by allocating money for "...improving the monitoring of radiation releases at TMI, including the purchase of monitoring equipment, funding existing monitoring programs, or funding new governmental monitoring programs.")

This is clearly a rational plan that gives local government a responsible way to protect the health and safety of area residents by establishing local control and accountability over operations at TMI. To date, Commissioner Hochendoner supports the ordinance, Commissioner Hetrick has voiced opposition, and Commissioner Rice is undecided.

Time and time again, the community has been assured by GPU that TMI is operating safely, and that radioactive emissions are within allowable Federal limits. Therefore, it seems that GPU should welcome increased on-site monitoring that would ensure public safety, increase trust and reassure area residents who are concerned about health effects, that TMI is indeed operating safely.

—Vera L. Stuchinski,  
Harrisburg  
The writer is chairperson of TMI Alert.

*The Patriot, Harrisburg, Pa., Tuesday, April 15.*

### Clean Air Act

#### EDITOR:

I urge Dauphin County Commissioners Hetrick, Hochendoner and Rice to pass a Clean Air Ordinance. We need the Ordinance to protect the local citizens, to regulate the nuclear industry whose TMI is in our back yard, and to insure meaningful research into nuclear accidents and their effects.

If Institute, W. Va., had had a clean air ordinance, residents may have learned years ago that Union Carbide was leaking dangerous fumes. Perhaps some lives in India could have been saved by that knowledge.

GPU Nuclear claims they can operate TMI safely. If they are as dedicated to safety as they say they certainly wouldn't mind us letting them know when they need to improve in that area.

The TMI Public Health fund should be dedicated to not only learning the effects of TMI-2's accident on the local citizens, but to monitoring TMI's ongoing effects.

—Nancy B. Wenger,  
Harrisburg

*The Patriot, Harrisburg, Pa., Thursday, April 24.*

### TMI monitor

#### EDITOR:

Congratulations to Dauphin County Commissioner Lawrence J. Hochendoner for staying on the radiation monitoring system.

He evidently is one of the

few public officials who care about our health and very life, enough to stand up for what he believes in.

You say that TMI is one of the most-heavily monitored placed on earth. I reply, maybe, but can they be trusted, or will they give us any numbers that make things look good?

You say Hochendoner would be doing everyone a favor if he dropped this ill-conceived idea instead of stirring up unwarranted fears about the reliability and trustworthiness of the monitoring system.

I say, "Wrong!" I do not feel they are unwarranted. If you had sat with the federal grand jury for eight months, you might feel differently.

Keep up the good work, Larry Hochendoner, TMI does need a watchdog.

—Mrs. Joyce M. Barry,  
Millersburg

*The Patriot, Harrisburg, Pa., Wednesday, May 7.*

### Nuclear accident

#### EDITOR:

It is hard to comprehend that on a beautiful spring day in Harrisburg that the most awful of nuclear accidents is happening on the other side of the world. But people should think about this long and hard because there but for the grace of God go the people of this area. We've got to stop believing that this can't happen here. It can happen in America, it can happen in Harrisburg.

We had our first warning on March 28, 1979, and now we've had our biggest warning of all. Let's not close our eyes. Try to imagine our city with a cloud of radiation over head instead of bright sunshine. Try to imagine the fear, the agony that the people of the Ukraine are feeling. Nothing in the world is worth the chance we are taking with our lives and our children's lives for the sake of nuclear energy.

Chances are that someday we won't have to wonder what it was like at Chernobyl — we'll know firsthand. Let's stop the risk before our luck runs out.

—Fran Bryan,  
Piketown

*The Patriot, Harrisburg, Pa., Friday, May 9.*

### Nuclear mishaps

#### EDITOR:

The obvious reluctance of TMI spokespersons to discuss publicly the Russian nuclear-power-plant disaster is understandable. The general tendency of the nuclear-power industry in the U.S. to distance itself as far as possible from any acknowledgement of similarity between the Russian disaster and the string of major accidents at U.S. "nukes" over the years is evident.

Nuclear-industry representatives are quick to tell us that — in contrast to a good many Russian reactors — U.S. commercial reactors are protected by containment vessels that (we are supposed to believe) would give us almost absolute protection against any malfunctioning of the reactor core. These same persons tell us that Russian reactor builders favor graphite for control purposes whereas American commercial reactors utilize pressurized water. So what?

What is not being said by these nuclear-power-industry apologists is that the strontium, the cesium, the radioactive iodine and the dozens of other deadly ingredients in the contaminated outpourings that might come from any U.S. reactor suffering a similar disaster would be indistinguishable from those coming from the Chernobyl plant.

Not the least of the similarities between Chernobyl and TMI is the fact that the American news media in both cases is accused of fomenting fear and generating disasters where none supposedly otherwise would exist.

Our representatives in Washington are now being asked to rubberstamp reprehensible administration efforts to short-circuit the licensing process for new nuclear power plants, and to bar the public from Nuclear Regulatory Commission hearings. Those representatives must be told that such arrogance, in the face of the Russian disaster, is intolerable.

In the midst of all our understandable concern and sympathy for the Russian people who have died and those who are yet to die because of the bulldozed attitude of the Russian leaders in

pushing nuclear power while saying "the public be damned," let us make certain that our own leaders are not allowed to ride roughshod over the legitimate concerns about nuclear power on the part of you and I, the very persons whose servants they are.

—John H. Murdoch,  
Camp Hill

*The Patriot, Harrisburg, Pa., Monday, May 12.*

### Recall coverage of TMI mishap

#### EDITOR:

Widespread criticism of the Union of Soviet Socialist Republic's reporting of the accident at the Chernobyl Nuclear Power Station deserves comment. There are many of us who can recall the conflicting and inaccurate reporting of the accident which occurred at the Three Mile Island Nuclear Power Station in 1979.

One of the few things that individual experts and committees appointed to investigate "our" accident agree upon was that neither the industry nor the government provided timely or accurate information. This contributed enormously to the problems experienced by the public in Southcentral Pennsylvania.

It is to be hoped that many lessons will be learned from these terrible accidents. We should certainly be reminded that "those who live in glass houses should not throw stones."

—George L. Jackson, M.D.,  
Harrisburg

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