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Three Mile Island Resources

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Three Mile Island Alert

Island Updates

News Watch on the
Harrisburg Area

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The Patriot, Harrisburg, Pa., Tuesday, Dec. 10, 1985

TMI: N-agency probes discovery of valve test results in trash can

By Mick Rood
Washington Bureau

WASHINGTON — Two technicians failed to test power-operated relief valve properly at Three Mile Island in October, and a Nuclear Regulatory Commission inspector later found the printed results in a wastebasket.

The NRC is trying to determine how the so-called "exception" and "deficiency" sheets detailing the incident turned up in the trash, according to documents obtained yesterday.

"Although we have no immediate safety concern at this point, we are concerned with the actions that took place," said NRC Restart Director William F.

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Kane in a Nov. 29 letter to GPU Nuclear Corp., which operates the plant.

While the matter remains "unresolved" pending a report from GPU Nuclear, Kane said there was no attempt to cover up the incident, because the reports were found "in an obvious place."

The inspector's discovery prompted TMI personnel to retest the valve on the next shift Oct. 25. They

found it safe, investigated the matter and promised better procedures, officials said.

The incident was disclosed for the first time in Kane's letter, which explained "generally favorable" results of an Oct. 18-25 NRC inspection of the utility's restart actions.

According to the letter, chief inspector Richard Conte "concluded there was no apparent motive to cover up the event. The E&D [exception and deficiency] forms were in an obvious place — the trash can in the I&C shop [GPU's Instrument and Control Department] — which is not a place one would discard a record if one were trying to cover up the event."

Calling it "a documentation control problem," Conte said GPU personnel were "careless by either discarding the forms or not providing enough atten-

tion to detail to assure the completed package was retained."

Conte suggested it would have been a violation of plant technical specifications not to "maintain original plant records." Or, if the test reports had been lost, Conte said it would have been a violation to "reproduce a reconstructed record."

Conte concluded, "it is merely speculative" as to whether specifications were violated, since it was likely GPU Nuclear's safety review process would have caught the incomplete test results.

Conte reported that neither the NRC nor GPU Nuclear could determine how the E&D sheets made it

into the wastebasket.

The NRC inspection report was critical of the GPU Nuclear shift supervisor for failing to question the two technicians closely enough about what they did, and for determining, based on inadequate evidence, that the valve was operable.

Utility spokesman Douglas Bedell said yesterday the incomplete test and missing sheets were noted in a shift turnover report that day, in a completed procedure report and on control room logs. The problem was corrected immediately, he said.

"There was no overall significance to the safety of the plant. There was no effort to hide it," Bedell said.

However, Bedell said three lessons were learned from the incident:

— Technicians should have "strong, thoroughly worked out reasons for challenging a procedure."

— Shift supervisors need to question technicians closely about the reasons for a change before agreeing to a change.

— All paper work should be kept with legally required reports.

In what Bedell described as a "tough memo" to management staff on Nov. 6, TMI Unit 1 Director Henry D. Hukill said that "discarding the E&D sheets was not a result of malice or intent to deceive."

However, Hukill added, "The very fact that the sheets ended up in the trash can is a most signifi-

cant matter and which I view as extremely serious."

Hukill said that keeping required safety documentation "was one of the primary factors that surfaced in the leak-rate investigations," referring to the systematic disposal of leak-rate tests at TMI Unit 2 before the 1979 accident that ruined Unit 2.

GPU Nuclear's predecessor, Metropolitan Edison Co., was convicted of criminal misconduct in that case.

As a Unit 1 restart requirement, GPU Nuclear has been forced to segregate from sensitive Unit 1 jobs any employee with a conceivable tie to the Unit 2 leak-rate incidents. The NRC is still investigating individual employees in that case.

Hukill said the company had not succeeded in convincing employees of the "absolute necessity for accurate documentation." He ordered that managers review the requirement with each employee.

Unaware of Hukill's internal memo of a month ago, anti-nuclear attorney Joanne Doroshow was quick to draw the leak-rate comparison.

"This is just outrageous," she said yesterday. "This is what they were indicted for. There are a lot of questions to be answered."

Doroshow represented Three Mile Island Alert in the Unit 1 restart proceedings.

GPU spokesman Bedell rejected the comparison between this Unit 1 incident and the Unit 2 leak-rate scandal.

The Patriot, Harrisburg, Pa., Friday, Dec. 13, 1985



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GPU 'newspeak'

GEORGE ORWELL'S classic and perceptive study of tyranny, "Nineteen Eighty-Four," offered the world a new name — Newspeak — for an old language — double-talk. He defined Newspeak as a language "designed to diminish the range of thought," so that war became peace, hate became love and lies became truth. And it is not at all surprising to find that Newspeak, in effect, has become the language of the nuclear industry where one of the most frightening industrial accidents ever experienced is presented as a testament to the safety of nuclear technology.

We were reminded of the industry's diminished range of thought by a recent incident at Three Mile Island, that monument to safe, clean and low-cost nuclear energy. When the operators of Unit 1 aren't opera-

ting the control panel with their belt buckles they seem to be filing their reports in the trash can.

It seems that's where a Nuclear Regulatory Commission inspector found the results of a test. Though the test — of a power-operated relief valve — was conducted improperly, NRC Restart Director William F. Kane saw nothing odd about the location of the reports. They were found "in an obvious place" he wrote in a letter to TMI-operator GPU Nuclear Corp. A trash can, he added, "is not a place one would discard a record if one were trying to cover up the event."

None of this should arouse any concern, however. These are the norms of operation at our friendly neighborhood mound of radioactivity. It may be a bit weird at TMI, but everything is under control, or so they keep telling us.

The Patriot, Harrisburg, Pa., Tuesday, Dec. 31, 1985

9 workers exposed to radiation at TMI Unit 1

By Connie McNamara
Patriot-News

Nine workers at Three Mile Island were exposed to low-level radiation yesterday when a pump seal in the Unit 1 auxiliary building sprang a leak.

The leak lasted 10 minutes and allowed 300 gallons of radioactive water to spill, according to Doug Bedell, a spokesman for plant operator GPU Nuclear Corp. The wa-

ter was contained in the building, he said.

An "unusual event" was declared at 1:50 a.m., GPU Nuclear spokeswoman Lisa Robinson said. Unusual event is the lowest of four emergency categories used in the nuclear power industry.

Bedell said the hair of three workers was contaminated. The clothing of two of those three, and that of six others, was contaminated, he said.

The contaminant decayed quickly, and only two of the nine underwent decontamination procedures, Bedell said.

The nine workers were contaminated by radioactive gas released from the water, and not by contact with the water, Bedell said. He identified the contaminant as xenon 138, a "noble" gas. Noble gas is used in the water that cools the reactor.

The nine employees were able

to return to work after the incident.

Bedell said the highest dose of exposure to a worker was 15 millirems. He termed that "very negligible" and not of medical consequence. Federal limits allow exposure to 3,000 millirems every three months, he said.

The faulty pump was isolated and replaced with a backup pump while the plant continued to operate at 88 percent of capacity, Rob-

inson said. The unusual event was declared over at 4:20 a.m.

Robinson said the pump supplies water to the reactor coolant system.

From about 1:30 a.m. to 2:30 a.m., radiation monitors along the shore of the island in Londonderry Twp. "showed slightly higher than normal background levels" of radiation, Bedell said. Usual levels are 6 to 7 microrems, but the levels during that hour ranged from 7.1 to 7.7 microrems, he said.

The overall dose of radiation released was calculated at less than .005 millirem or .1 percent of the quarterly limit of noble gas release allowed by federal regulations, Bedell said.

Radiation monitors in the building indicated a low-level release of noble gases from the plant's vent stack as a result of the leaking radioactive water, Robinson said.

Plant personnel began pump repairs immediately, and U.S. Nuclear Regulatory Commission inspectors were briefed during the day on the situation, Bedell said. Technicians were still trying to determine what caused the leak he said.

A spokeswoman for the NRC in Bethesda, Md., said that while problems with pump seals do not occur on an everyday basis, "it's not all that unusual, either."

The spokeswoman, Sue Gagner, said she would not classify it as a serious problem.

"We are concerned and are following it," Gagner said. "We have people there, and we're getting reports."

The Patriot, Harrisburg, Pa., Tuesday, Dec. 24, 1985

NRC limits issues for investigation

United Press International

WASHINGTON — The Nuclear Regulatory Commission said yesterday it will hold a hearing to investigate document falsification at the Three Mile Island nuclear plant.

The NRC, though, barred any discussion of whether top plant managers knew about it.

Over the objections of two NRC commissioners, the commission set ground rules that sharply limit what issues can be addressed in a "legislative format" hearing into improprieties at TMI's Unit 2 reactor in Londonderry Twp., which was badly damaged in the nation's worst commercial nuclear accident on March 28, 1979.

In particular, the commission listed 24 current or former top officials of plant owner General Public Utilities Corp. that it said would be "outside the scope" of its hearing.

Those exempted from scrutiny include GPU Chairman William Kuhns, GPU President Herman Dieckamp, former GPU Nuclear Corp. President Robert Arnold and current GPU Nuclear President Philip Clark.

"The [hearing's] presiding board shall not address any issue regarding any alleged knowledge or involvement of these individuals in the falsifications that occurred at the TMI-2 reactor from Feb. 2, 1978, until March 28, 1979," the NRC said in a Federal Register notice.

The commission said those top officials already had been "cleared" by the federal prosecutor who handled the document falsification case, David Queen, then U.S. attorney for Central Pennsylvania.

The NRC hearing concerns allegations by Harold Hartman, a former control room operator at Three Mile Island's Unit 2 reactor, that test data on water leak rates from the reactor's cooling system was falsified by plant operators to ensure NRC requirements were met.

Hartman's allegations prompted a federal grand jury investigation that resulted in GPU pleading guilty or no contest to seven criminal charges of document falsification on Feb. 29, 1984.

GPU's guilty plea occurred at a time when the utility was trying to get NRC per-

mission to restart TMI's undamaged Unit 1 reactor, which had been shut down since the accident at the twin Unit 2 reactor.

The NRC decided in February 1985 to separate the document falsification charges from its proceedings on the Unit 1 restart, despite protests from anti-nuclear activists and some Central Pennsylvania elected officials that the allegations directly touched on GPU's competence and integrity.

The commission said it would institute a separate hearing to determine which TMI personnel were implicated in the falsification.

The hearing ground rules announced by the NRC yesterday excluded top GPU officials on the basis of statements by the federal prosecutor, Queen, at the time of GPU's guilty plea, which was part of a plea bargain agreement.

"Queen stated the evidence developed in the grand jury inquiry did not indicate that any of the [GPU officials]... participated in, directed, condoned or was aware of the acts or admissions that are the subject of the indictment," the NRC said.

Ex-TMI operator cheated on test, court agrees

The U.S. 3rd Circuit Court of Appeals in Philadelphia has affirmed the conviction of James R. Floyd for cheating on an exam to qualify as a nuclear operator at Three Mile Island, the U.S. attorney's office said yesterday.

A jury convicted Floyd in November 1984 on two counts of submitting false statements to the Nuclear Regulatory Commission. Floyd was found guilty of using another person's work to complete 1979 take-home examinations in July and August.

Floyd, who admitted using the answers because he was pressed for time on the eve of his vacation, was the first person nationwide to be prosecuted for criminal offenses at a nuclear plant.

A former supervisor at TMI Unit 2, Floyd was the only employee indicted on criminal

charges involving conduct at the Londonderry Twp. nuclear plant, then operated by Metropolitan Edison Co.

Prosecutors said the cheating caused Met-Ed to falsely certify Floyd's requalification as a senior reactor operator with the NRC.

After the conviction, Floyd's attorney, William J. Fulton, claimed his client had been singled out for selective prosecution and noted other incidents of cheating. Fulton was unavailable for comment last night.

Days after his Nov. 16 conviction, Fulton appealed the verdict and moved for a new trial on 14 grounds, many of which dealt with rulings made by federal Judge Sylvia Rambo before and after the trial.

Fulton asked Rambo to set aside the verdict because the prosecution failed to show that Floyd had cheated with intent to deceive any-

one and pointed to the fact that Floyd did not submit the material to the NRC.

In March, Rambo refused to overturn Floyd's conviction and rejected 11 of Fulton's acquittal and new trial arguments. Most of the points dealt with court rulings on pre-trial motions, including a request that Floyd be tried elsewhere because of extensive publicity.

Rambo said it was the "jury's function" to determine the credibility of Floyd and other witnesses on the issue of intent. The judge said setting aside the verdict would have invaded "the province of the jury to resolve credibility."

Rambo placed Floyd on probation for 2 years and ordered that he pay a \$2,000 fine and provide 400 hours of community service work for those whose lives were affected by the 1979 accident at TMI Unit 2.

The Patriot, Harrisburg, Pa., Thursday, Dec. 19, 1985

Xenon gas taints 8 at Unit 1

Eight people, including a Nuclear Regulatory Commission inspector, were contaminated by a small amount of radioactive gas at Three Mile Island's Unit 1 nuclear reactor, a plant spokeswoman said.

Seven plant employees and the inspector washed with soap and water to remove the contamination and then returned to work, according to Lisa Robinson, spokeswoman for GPU Nuclear Corp., plant operator.

The contamination was in the form of xenon gas, and the dose involved was .000363 millirem, she said.

According to Robinson, the workers were performing maintenance work on a waste gas compressor in the auxiliary building shortly before 8 p.m. Tuesday when they opened a seal on a gas chamber they thought was depressurized and the xenon gas escaped. Pressure in the chamber was less than a half-pound per square inch, she said.

The workers were not wearing protective clothing, Robinson said.

During the incident, normal radiation releases from the nuclear plant's stack rose slightly, she said. The release was .00726 percent of the quarterly, 5-millirem limit for noble gases allowed by the Nuclear Regulatory Commission, she said.

Details of a small fire also were disclosed in the NRC's weekly report on the cleanup of Three Mile Island's Unit 2 reactor, which was damaged in the 1979 accident.

The fire occurred inside the reactor building when a light bulb ignited paper towels that wrapped it, according to the report. The light was located at the railing of a defueling platform where workers operate tools to clean up debris in the reactor.

According to the NRC report, the fire was extinguished in less than a minute and no workers were contaminated.

The Patriot, Harrisburg, Pa., Tuesday, Dec. 17, 1985

Container at Unit 2 slips to floor

Cleanup work delayed for about 15 hours

By Michael Sullivan
Patriot-News

A container used to store debris from the damaged Three Mile Island Unit 2 nuclear reactor slipped to the reactor floor and delayed the cleanup process for about 15 hours during the weekend.

The 12½-foot by 14-inch canister was partially loaded with radioactive debris from the floor of the reactor about 7:45 p.m. Saturday when it fell about a foot into a rubble pile in the bottom of the reactor, according to Gordon Tomb, a spokesman for GPU Nuclear Corp.

One end of a long-handled tool that workers used to load the debris snapped off inside the canister when it fell, Tomb said yesterday.

A service crane was used to return the canister and sleeve to a carousel device which suspends up to five canisters above the reactor floor, by 11:45 a.m. Sunday.

There was no damage to the canister or sleeve and no emergency conditions resulted from the accident, Tomb said.

Officials believe the canister fell because a locking device on the canister sleeve was not engaged. Tomb said the incident is under review and steps will be taken to prevent a similar occurrence.

Since the loading process began in mid-November, operators so far have filled two canisters with debris, which is made up of radioactive fuel, fuel rods and pieces of fuel assembly that were damaged in the 1979 accident at Unit 2.

Debris in the reactor's core is covered with water. Operators work from a platform suspended above the reactor vessel and use long-handled tools to load the canisters.

Filled canisters are stored under water and eventually will be transported by the U.S. Department of Energy to the Idaho National Engineering Laboratory in Idaho Falls.

Also during the weekend, operators began installation of vacuum equipment that will be used to pick up loose debris and move it into canisters. The loading of canisters using long-handled tools was scheduled to resume yesterday after completion of the vacuum equipment installation.

The safety of the cleanup process at Unit 2 was touted Thursday at a meeting of the Advisory Panel for the Decontamination of Three Mile Island Unit 2, at Holiday Inn Center City.



The Patriot, Harrisburg, Pa., Wednesday, January 23, 1986

TMI Unit 1 shut down for repairs to leaky line

By Frank Lynch
Patriot-News

The Unit 1 reactor at Three Mile Island will be out of service for at least a week as plant workers repair a leaky steam line.

Spokeswoman Lisa Robinson said the reactor was shut down yesterday and workers began inspecting the steam line today.

Operators began shutting down the unit Monday night because of "change" in the pressure of a line that heats non-nuclear water before it is converted to steam by one of two steam generators.

Operators have been monitoring the leak for the last two weeks. GPU Nuclear Corp., plant operator, announced 10 days ago it was shutting down the reactor then to complete the repairs.

But three days later, spokes-

men said the leak was contained and officials planned to continue operations with the leaky line until March, the next planned plant outage.

"Because we've seen a change, we've decided the best thing to do is shut down and do repairs," Robinson said.

The leak cuts the plant's efficiency by reducing the amount of steam, she said. The leak caused the reactor to lose a "relatively small" 25 megawatts of its 860-megawatt output, Robinson said.

She said the leak is in the secondary or non-nuclear side of reactor operations and is not considered a safety hazard.

Unit 1 has been operating at 100 percent of capacity since Jan. 6.

In a related development, a portion of the Londonderry Twp. plant's integrated control system, which controls and coordinates

the major plant systems, lost power Friday while technicians were replacing a repaired transmitter, spokeswoman Gordon Tomb said.

The system's functions include controlling the flow of water going into the steam generators and adjusting control rods in the reactor to maintain power at an even level, Tomb said.

Power was lost when technicians applied power to the transmitter and the automatic control function of the system shut down, Tomb said.

The plant was controlled manually for about 1½ hours and operated at 95 percent to 97 percent of capacity during that time, GPU Nuclear said.

The U.S. Nuclear Regulatory Commission was notified, but Tomb said he didn't know whether notification was required or was done as a courtesy.

Electrician gets TMI radiation dose

An electrician at Three Mile Island's Unit 2 reactor was contaminated yesterday with a "slight" radiation dose when a fellow worker touched the back of his head with a gloved hand.

The 34-year-old unidentified employee received a dose "less than 1 millirem" to skin on the back of his head, said Lisa Robinson, spokeswoman for plant operator GPU Nuclear.

The man was decontaminated at Hershey Medical Center and released in satisfactory condition, according to a medical center spokeswoman. Doctors attributed the man's dizziness to dehydration and low blood pressure and said the incident was unrelated to any radiation exposure.

GPU standards limit workers to a skin dose of 5,000 millirems every three months, according to spokesman Douglas Bedell. The Nuclear Regulatory Commission's limit is 7,500 millirems in three

months. The incident began shortly before 7 a.m. when one of a five-man crew working in the reactor containment building in Londonderry Twp. began feeling faint and dizzy and signaled for help.

While the man was lying on the floor, a fellow worker removed the man's respirator and supported his head with a gloved hand, the source of the contamination, Robinson said.

GPU Nuclear declared an unusual event, the lowest of four emergency classifications, because the man was taken off the site by an ambulance.

It was unclear if the worker, employed by Catalytic Inc., a Philadelphia-based TMI contracting firm, suffered internal contamination.

Robinson said radiation levels in the containment building were about 10 millirems an hour, a "very low" level.

THE PATRIOT, HARRISBURG, PA., 1985027, 120077, 1, 1306

Scientists oppose weakening N-plant safety rules

Associated Press

WASHINGTON — Critics of atomic power are opposing any effort by the Nuclear Regulatory Commission to reduce its estimates on the amount of radioactivity that could escape in a severe power plant accident.

Research over the past five years costing \$300 million has shown that estimates in use since 1975 on the "source term" — or radioactivity that could escape — are too high in most kinds of accident possibilities.

The Union of Concerned Scientists, a group traditionally opposed to nuclear power, expressed fears in a report to be filed with the commission today that the new codes developed from the research results might be used prematurely to begin weakening safety rules.

"Given the climate in which the source term reassessment is being carried out, re-evaluating regulations in

NRC parlance will undoubtedly mean relaxing the regulations," the group's statement said.

Joseph Fouchard, an NRC spokesman, said agency officials still are gathering scientific data for evaluating the issue.

"It's premature to speculate what changes might be made in the regula-

tions," Fouchard said.

An American Physical Society panel in February generally agreed that the research shows the government's currently used estimates on potential radioactivity releases from accidents are too high in most likely scenarios.

However, it said, the estimates also might be too low for some specific types

of accidents. Overall, the data and experiments so far were "not adequate" to reach a broad conclusion that the nation's 97 licensed reactors are less dangerous than previously assumed, the physicists concluded.

The NRC has agreed that the data so far are insufficient for a broad easing of

regulations in the near future, as advocated by utilities and industry officials.

But in July, the commission proposed using the new codes to look at the current regulatory practices and "revise them as needed" on a case-by-case basis.

"Notwithstanding the limitations and uncertainties that have been expressed, the new methods are so much better than the [1975] Reactor Safety Study methods that their utilization is warranted," the commission said.

The research was spawned by the little radioactivity that escaped in the March 1979 partial core melt at the Three Mile Island plant in central Pennsylvania — the worst accident in the industry's history.

That led government and industry officials to speculate that previous assumptions about the health and safety risks of atomic power accidents were much too pessimistic and that less stringent rules might be called for.

NRC would ease TMI generator tube rules

United Press International

WASHINGTON — The Nuclear Regulatory Commission has proposed license changes for Three Mile Island's undamaged reactor that would relax restrictions on defects in the unit's steam generator tubes.

The NRC has proposed the changes in response to a November 1985 petition by General Public Utilities Nuclear

Corp. The license changes for the operating Unit No. 1 reactor relate to steam generator tubes that carry heated, highly pressurized, radioactive water from the reactor core. Defects in the tubes can lead to radiation leaks.

Under present rules, a tube must be repaired or removed from service when a defect exceeds 40 percent of the tube wall's thickness, the NRC said.

The new proposals would maintain

the 40 percent limit on one side of the tube, but replaces that limit on the other side of that tube with a sliding scale that goes from 40 percent to 70 percent of the tube wall's thickness, depending on the size of the defect.

The tubes in the undamaged Unit No. 1 reactor have been plagued with corrosion, partly because the unit was shut down for six years after the accident at its twin unit.

GPU penalizes 17 in leak-rate falsification

By Mick Rood
Washington Bureau

WASHINGTON — GPU Nuclear Corp. has disciplined 17 of 24 employees who were involved in or should have known about falsification of leak rates at Three Mile Island seven years ago, company officials said yesterday.

Punishment ranged from a reprimand to combinations of a reprimand, docking of one or two weeks' pay and removal from consideration for licensed operating jobs at TMI. Seven employees were exonerated of wrongdoing.

None of the utility employees was fired. Only two of them were found to have falsified the leak rate tests, and another two were strongly suspected.

The 17 were singled out for punishment in a report issued by a five-member "assessment panel" chaired by Philip R. Clark, president of GPU Nuclear. Employees who were investigated were identified, but letters identifying them and their particular punishments were not released in order to protect their privacy, GPU Nuclear said in a press release.

Chief company spokesman Doug Bedell refused to say when the letters went out to employees or answer other questions.

TMI Alert Inc., an anti-nuclear group, criticized the report as incomplete and the disciplinary penalties as "nothing more than a slap on the wrist."

TMI Alert spokeswoman Joanne Doroshov said the penalties levied against the workers were less severe than warranted and criticized the report for not disclosing the names of those disciplined.

The company's disciplinary actions follow Metropolitan Edison Co.'s guilty plea in February 1984 to one criminal-misconduct count that it knowingly used "inaccurate and meaningless" procedures to test coolant water leakage at TMI Unit 2, prior to the March 1979 accident there. In federal district court, Met-Ed also pleaded no contest to six counts that included charges that employees manipulated test results in reports to the Nuclear Regulatory Commission.

Met-Ed, and not its employees, was indicted by a federal grand jury.

Only current GPU Nuclear employees who worked at TMI Unit 2 for Met-Ed were considered for discipline. About 20 former employees have been investigated in the past by the government. Other utility officials cleared of wrongdoing in the leak rate case by a U.S. attorney, including former GPU Nuclear President Robert Arnold, were not scrutinized.

Those punished were six control room operators, five shift foremen, three shift supervisors, a unit superintendent of technical report, a station superintendent for Units 1 and 2 and a Met-Ed vice president for generation.

The various punishments, although not tied to names, are linked with job classifications in the report. Thus, some specific identifications can be made.

For example, getting the lightest penalty of a reprimand was John G. Herbein, who was the vice president of generation — the highest-ranking utility official to be investigated.

As with most of the others, the panel said Herbein neither knew of the leak rate rigging, nor could he have "reasonably been expected" to have known. The panel

concluded:

"As the responsible officer, this employee failed to provide for adequate management and supervision at TMI-2."

Herbein works for Pennsylvania Electric Co., a sister utility of GPU Nuclear. None of the 17 employees punished holds a licensed job now at the newly restarted TMI Unit 1 or at the accident-damaged Unit 2.

TMI Alert's Doroshov said the report is a "whitewash" because it ignored evidence that Herbein knew of the falsification and because it failed to investigate the roles of management above his level.

The panel did single out for special comment and punishment several of the 17 employees.

It said one of the shift supervisors had not shown "he can be relied upon to repeat his past improper behavior." That supervisor will be under special supervisory review this year in his current job, plus being docked two weeks' pay, formally reprimanded and being prohibited from licensed operating jobs.

The panel said there was "testimony, as well as strong circumstantial evidence"

that one of the five shift foremen at TMI Unit 2 participated in, or knowingly tolerated, manipulation of tests. The foreman was subjected to the other penalties and told, in addition, "that if the test manipulation or toleration of manipulation had occurred at the present time, he would have been discharged."

Two of the lowest-level employees investigated, the control room operators, were found to have manipulated leak rate tests. One operator was suspected of it.

Many of the panel's findings were based on a 14-month probe finished in September by Edwin H. Stier, a former director of the New Jersey Division of Criminal Justice.

The NRC plans to investigate individual employees' involvement in the leak rate test falsifications this year. The GPU Nuclear panel made some of the punishments contingent on what an NRC licensing board finds.

United Press International and The Associated Press contributed to this report

The Patriot, Harrisburg, Pa., Friday, Dec. 13, 1985

Aamodts renew criticism of TMI study

By Christopher Quinn
Patriot-News

Marjorie and Norman Aamodt, whose independent Three Mile Island cancer study prompted a similar state study, attacked the credibility of state results last night.

The Aamodts and local residents interviewed people living on three hilltop streets around TMI and found cancer rates from 1980 through 1984 were seven times higher than expected in neighboring communities.

The state Health Department's study, which critiqued the Aamodt study, found no connection between cancer rates and a 1979 accident that crippled TMI Unit 2's reactor.

The state report was released in September and soon was criticized after a Sunday Patriot-News story reported the state may have

included 28,610 people too many in its study of residents within five miles of the plant.

The Aamodts renewed that criticism last night, saying half the people included in the state study should not have been. They made their remarks at a meeting of the Advisory Panel for the Decontamination of Three Mile Island Unit 2 in the Holiday Inn Center City.

Mrs. Aamodt said half of the people living near TMI at the time of the accident have since moved, and the state failed to interview them for its report. Instead, Health Department workers interviewed the people who moved in, thus diluting the state results even more, Mrs. Aamodt said.

The Aamodts, statisticians now living in Lake Placid, N.Y., challenged the state's review of its study.

"I think that the state's claim

that their study received peer review is a very hollow claim," said Norman Aamodt.

His wife said one of the reviewers admitted to her that his knowledge of epidemiology is limited. Another said he was unaware of the dilution of the sample, and another was given only half a day to review the state document before it was released, she claimed.

The Aamodts took offense at state criticism of their independent study.

The state report said the Aamodts skipped around the Middletown area, interviewing residents they knew to have cancer. The Aamodts claimed they chose their study area because people living high up in the TMI area claimed symptoms of radiation sickness in days after the accident.

"We did an intelligent study," said Mrs. Aamodt.



Marjorie Aamodt

The Patriot, Harrisburg, Pa., Thursday, February 6, 1986

Pair taking appeal for TMI data to state Supreme Court

By Frank Lynch
Patriot-News

Two researchers into the health effects of the Three Mile Island accident are taking their quest for state records to a higher court.

A Commonwealth Court panel last month denied Norman and Marjorie Aamodt access to pregnancy data that the state Department of Health gathered from 1976 through 1981.

Mrs. Aamodt was in Harrisburg yes-

terday to announce she and her husband were appealing the ruling to the state Supreme Court. She contended that the lower court's decision "appears to be a conspiracy" with the health department to keep information from them.

She said Commonwealth Court misunderstood what data they were seeking, and that the decision represents a "dark hour for the people of Pennsylvania since this ruling can serve to cut off any independent research and review of important health questions."

The Aamodts, who live in New York but maintain a residence in Parkersburg, Chester County, had been intervenors in the TMI Unit 1 restart process. They are seeking the health department data because they believe there is a relationship between radiation releases during the March 28, 1979, nuclear power plant accident and adverse pregnancy outcomes in the area.

The Aamodts said they questioned a number of area families in 1984, and 11 of

19 women interviewed who were pregnant at the time of the accident had birthing "abnormalities."

Last year, the Aamodts said, they asked Dr. George Tokuhata, director of epidemiology research for the health department, for "raw data" on pregnancy outcomes during and after the accident. Tokuhata refused, saying studies were ongoing and that the information was confidential.

The Aamodts filed suit a year ago, re-

questing the data under the state's Right-to-Know Act and under the department's own policy of making data available to researchers. They said any information would remain confidential because they did not want data that contained names of individuals or hospitals.

The court upheld the state's decision to withhold the information, saying it is not on public record and that the Aamodts cannot be considered "collaborating researchers" with the health department.

The Patriot, Harrisburg, Pa., Friday, Feb. 14, 1986

TMI fungus: It's not expected to mushroom into a monster

By Michael Sullivan
Patriot-News

One-celled organisms have been discovered living in water covering the highly radioactive core rubble at Three Mile Island's damaged Unit 2 reactor.

The organisms, believed to be several varieties of fungus, bacteria and algae-like creatures, are clouding the 20 feet of water that covers the reactor core. The cloudiness has hampered GPU Nuclear Corp.'s efforts to remove the fuel, fuel rods and other parts.

"The microorganisms are living in it and thriving," said Gordon Tomb, spokesman for GPU. The warmth of the water and photosynthesis near underwater lights apparently have encouraged growth, he said. "It's something like getting a sample of pond water."

Workers stand on a platform above the water and use long-handled tools to load debris into canisters for removal.

Because of the water's cloudiness, workers must use underwater cameras to see the ends of the tools. The organisms also clog a filtration system used to remove small particles, Tomb said.

Radioactivity near the core where microscopic life has been discovered measures in the hundreds of rems an hour, Tomb said. That level of radioactivity is hundreds of thousands of times higher than the workers on the platform are exposed to, Tomb said.

He said that because the core is under water, exact levels of radioactivity around it are difficult to determine.

Ann Overton, public affairs officer for the U.S. Nuclear Regulatory Commission in King of Prussia,

said microorganisms have not been discovered inside any working reactors, where heat can reach hundreds of degrees. However, she said, simple life forms have been found in a few "radioactive environments," including experimental reactors that are regularly shut down.

"What the core is like is a swimming pool that hasn't been cleaned," Overton said.

John Leutzelschwab, professor of physics at Dickinson College in Carlisle, said some microorganisms can withstand very high levels of radioactivity before dying.

"To kill an amoeba takes about 150,000 rems, a paramecium 300,000 rems," he said, citing two common microscopic animals. "That way they could survive several hours before receiving a fatal dose, and meanwhile they may have reproduced several times."

A fatal dose for humans is about 500 rems, and sickness would be induced with about 100 rems, Tomb said.

Meanwhile, GPU has hired microbiologists and chemists to take a look at ways to kill the organisms.

"We are checking it out for compatibility of our chemical processing system," Tomb said.

Both Leutzelschwab and Overton said there is little chance of some new radiation-immune mutation arising from the radiated microorganisms.

"It might be possible, but I wouldn't expect it," Leutzelschwab said, adding that any genetic change in such simple species probably would be fatal.

"No, we will not have any monster," Overton said.

The Patriot, Harrisburg, Pa., Wednesday, March 12, 1986

2 feet of water made difference at TMI, scientist says

By Mick Rood
Washington Bureau

WASHINGTON — Two feet of water in the bottom of the Three Mile Island Unit 2 reactor core vessel prevented containment from being breached during the March 1979 accident, a government scientist said yesterday.

G.D. McPherson, who is overseeing the cleanup of the crippled reactor for the U.S. Department of Energy, told the U.S. Nuclear Regulatory Commission evidence now suggests that three hours into the Unit 2 accident only two feet of water remained.

As much as 70 percent of the material in the core melted down, McPherson estimated.

The material included fuel, parts of the core structure and the tubes in which the fuel is contained, McPherson said.

He said 5 percent to 10 percent of the fuel itself melted, after reaching 5,100 degrees. Much more — perhaps 60 percent — began to liquify after reaching 3,050 degrees.

McPherson said the 70 percent estimate, the highest figure yet on damage inside the core, is subject to further research at TMI.

McPherson's estimate came 13 months after the first public disclosure that uranium fuel had melted during the accident. Previous studies had indicated only that some metal parts in the core had melted.

Industry critics and opponents of the nuclear in-

dustry said the finding last year meant the accident was more severe than had been believed.

Officials of GPU Nuclear Corp., which operates the plant, contest the 70 percent estimate, at least as it applies to the uranium fuel. Executive Vice President Ed Kintner said the estimate more likely applies to "core material," such as the fuel rods in the reactor.

While much of the molten mass of material was settling to the bottom of the vessel, the two feet of water helped keep the stainless steel liner of the containment at below melting temperatures.

McPherson said that although the bottom of the vessel has yet to be fully examined, there is no evidence of serious damage to the structure.

NRC member Frederick Bernthal summarized that the two feet of water cooled the liner enough "to

prevent breach."

"It is remarkable the core kept its integrity with no added water for such a long period of time," said Commissioner James Asselstine.

McPherson said the water likely would have stayed for some time, since pressure inside the vessel kept it from boiling off. It was three hours and 47 minutes into the accident before the core again was covered with coolant by the reactivated High Pressure Injection System.

U.S. Energy Department officials also told the NRC the government would fund TMI research at \$12 million next year and another \$8 million in 1988, enough to help complete the cleanup.

Associated Press accounts are contained in this story.

TMI cleanup

Feds may back down from responsibility

THE federal government's role in the 1979 accident at Three Mile Island and its aftermath is remarkable only as an example of bureaucratic sloth and inertia at its worst. It soon became clear after the accident that though the feds had been the primary force behind the expansion of nuclear power in the country, they were not at all inclined to assist in cleaning up the mess they helped create.

Eventually, and with great reluctance, the government responded to the pleas of Governor Thornburgh and agreed to allot some funds toward the cleanup of the damaged Unit-2 reactor. A commitment was made to provide \$150 million over four years toward the \$1 billion decontamination effort. Now there are indications that the federal funding will be reduced for 1986 and eliminated in 1987.

According to executives at TMI-owner General Public Utilities, the Department of Energy has advised them that it expects the \$18 million originally promised for 1985 to be reduced by \$5.5 million. The federal Office of Management and Budget, according to GPU Chairman William G. Kuhns, wants to eliminate next year's subsidy.

FEDERAL financial support for cleanup finally was provided under the guise of obtaining information about the accident that possibly could be used to make nuclear plants safer. In our view, the federal govern-

ment had a much larger responsibility. It should have taken control of the cleanup effort at the very beginning instead of allowing it to flounder in a vacuum that continued for years while the search for funds was underway. Now it is about to wince on its commitment as a participant in the decontamination of the worst nuclear power plant accident in the nation's history.

This appears to be another manifestation of the Gramm-Rudman deficit-reduction plan at work. And it has the potential to unravel the funding arrangement put together with great difficulty to complete the enormous task of removing the radioactive rubble and other contamination from Unit 2. This is not a task that can be put off until Washington gets its financial house in order. The job must go on with all deliberate speed until the threat to the public is removed.

IF THE CUTS in funds for cleanup are carried out, it will put a shameful end to an inept performance by the federal government. It will be very interesting to see, when the dust finally settles, how much money the Reagan administration continues to spend on nuclear power development while axing nuclear power cleanup.

Instead of shipping Unit 2's radioactive gunk to Washington state for burial, maybe it should be rerouted to Washington, D.C., to aid the administration in reconsidering its ill-advised decision.

Unit 1 started to take shape in 1968

Here is a chronology of events at Three Mile Island Unit 1.

✓ 1968 — Ground is broken for construction of 850-megawatt reactor. The cost of the reactor is \$400 million.

✓ Feb. 17, 1979 — Unit 1 is shut down for its fourth refueling after 232 days of continuous operation. The Unit 2 accident in March 1979 occurs as the refueling ends, and Unit 1 is returned to cold shutdown.

✓ Oct. 3, 1985 — Unit 1 is restarted.

✓ Oct. 9, 1985 — Unit 1 increases power to 15 percent, goes on line and produces electricity for the first time since restart.

✓ Oct. 12-19, 1985 — Three leaks are detected in lines that drain steam from the turbine system. Steam with minute traces of radioactivity is released into the atmosphere. Power is cut to 6 percent from 40 percent while repairs are completed.

✓ Oct. 24, 1985 — Unit 1 increases power to 48 percent of output.

✓ Oct. 25, 1985 — A Nuclear Regulatory Commission inspector finds the results of a test of a power-operated relief valve in a waste-basket after two technicians failed to test the valve properly. The inspector's discovery prompted Unit 1 personnel to retest the valve on the next shift. The plant personnel found the valve to be safe and determined that the disposal of records was not an attempted cover-up.

✓ Oct. 28, 1985 — Nine employees working on a pump are slightly contaminated by xenon, crypton and argon when 150 gallons of radioactive water spill from a pressurized system into floor drains in the basement of the Unit 1 auxiliary building. Radioactive gases also are released into the atmosphere.

✓ Nov. 22, 1985 — A worker leans over a control panel in the Unit 1 control room and his belt buckle catches on a toggle switch in the Unit 1 control room, temporarily increasing reactor power from the federal limit of 48 percent, to 53 percent. The incident is

one of 11 disclosed by Three Mile Island Alert.

✓ Nov. 23, 1985 — TMI-1 increases power to 75 percent.

✓ Dec. 1, 1985 — Breakdown in an electrical generator at Unit 1 forces an unplanned automatic shutdown of the reactor. Slightly radioactive steam is released into the air when the plant shuts down. The reactor restarts after about 12 hours.

✓ Dec. 2, 1985 — In restarting after the unplanned shutdown, Unit 1 achieves only 71 percent of total output, although officials had planned to reach 75 percent. GPU Nuclear officials blame deposits inside two steam generators for the decreased output. Unit 1 finally reaches 75 percent output on Dec. 5 after operators raise the water level in the steam generators.

✓ Dec. 2, 1985 — Nuclear Regulatory Commission officials say Unit 1 will not achieve 100 percent power output because of the deposits inside two steam generators. State officials say that unless the plant operates frequently enough to compensate for the reduced efficiency, Metropolitan Edison Co. customers may see rates increase.

✓ Dec. 17, 1985 — Seven plant employees and an NRC inspector are contaminated by a small amount of radioactive xenon gas when they open the seal on a gas chamber they thought had been depressurized.

✓ Dec. 30, 1985 — Nine workers are contaminated by radioactive gases when a seal on a pump leaks for 10 minutes and spills 300 gallons of filtered water from the radioactive side of the plant.

The Patriot, Harrisburg, Pa., Saturday, March 1, 1986

TMI-1 radiation monitor left off 7 hours

Associated Press

A radiation monitor at the undamaged Three Mile Island Unit 1 reactor was out of service for more than seven hours because an operator didn't reopen a valve, the plant's operator said yesterday.

The radiation monitor was out of service from 6:05 p.m. Thursday to 1:29 a.m., said Doug Bedell, spokesman for GPU Nuclear Corp., the plant's operator.

The monitor at the plant's condenser, used to detect radiation leaks, was "inadvertently" put out of service after an auxiliary operator checked and drained it but didn't reopen a valve, he said.

Another monitor nearby showed no increase in radiation during the time the monitor was out of service, Bedell said.

Unit 1, restarted last October, operated at full power for 23 of 27 days in February, Bedell said.

The Patriot, Harrisburg, Pa., Saturday, Feb. 15, 1986

Leak-rate tests violated rules, NRC tells GPU

By Frank Lynch
Patriot-News

The Nuclear Regulatory Commission has issued the operator of Three Mile Island a notice of violation for events that took place at Unit 1 more than seven years ago.

The violation, which concerns improper leak-rate tests on Unit 1 between April 1978 and March 1979, was issued Jan. 29 but made public only in a routine NRC weekly update of activities at Unit 1.

An NRC spokesman said commissioners informally reviewed and approved the notice before it was issued.

The notice does not impose a civil penalty on TMI operator GPU Nuclear Corp., nor does it require the utility to respond to the violation notice.

Jane Axelrad, director of enforcement for the Office of Inspection and Enforcement which issued the violation notice, said NRC Region 1 officials began looking into leak-rate allegations at Unit 1 in July 1983 after similar charges were leveled against former TMI operator Metropolitan Edison Co. concerning Unit 2.

A federal grand jury in 1983 handed up an 11-count indictment against Met-Ed in connection with leak-rate falsifications at Unit 2 of the Londonderry Twp. nuclear facility.

Met-Ed pleaded guilty to one count and no contest to several others, and paid a \$40,000 fine and contributed \$1 million to help communities prepare for a potential nuclear emergency.

Axelrad said the Office of Inspection and Enforcement began investigating the allegations several years ago but found there was no pattern of willful violation of NRC rules.

But the matter was not brought to a conclusion — the is-

suance of the notice — until last month because, "It was folded up in a lot of TMI stuff" the office was working on.

She said the timing of the notice had nothing to do with restart of TMI-1 four months ago. The unit was restarted Oct. 3 after sitting idle in the 6½ years since the March 28, 1979, accident at TMI-2.

TMI spokeswoman Lisa Robinson noted investigations of Unit 1 practices did "not support contentions that they [improper testings] were done intentionally." She said the company several years ago took corrective measures that were endorsed by the NRC.

"I don't know why [the notice] is coming out seven years hence, but the matter has been thoroughly investigated by the NRC and by a special investigator that we retained. We were just as anxious to correct this."

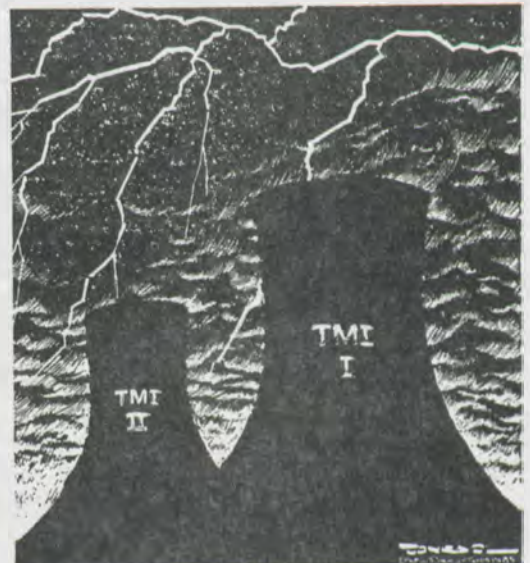
She also said the NRC incorrectly cited GPU Nuclear: "The action was against Met-Ed. GPU did not exist at that time."

Axelrad said, "It probably should have been issued to Met-Ed." GPU Nuclear, a subsidiary of General Public Utilities, succeeded Met-Ed in operating the plant in 1982 — four years after the alleged violations.

Axelrad said NRC investigators reviewed 645 tests run at Unit 1 in 1978-79, and only about "5 percent of them were questionable."

The notice of violation cited the company for lacking adequate testing procedures, failing to maintain proper records, and failing to correct deficiencies once identified.

Axelrad said the notice was evaluated as being a "severity level three" problem, with one being the most severe and five being the least severe.



Lightning never strikes twice...

Unit 2 still contains 140 tons of debris

More than 13 tons of molten nuclear fuel and core components have been removed from Three Mile Island's Unit 2 reactor.

Spokesmen for TMI plant operator GPU Nuclear Corp. say an additional 140 tons of debris caused by the March 28, 1979, accident must be removed before the \$1 billion cleanup operation is finished in 1988.

Unit 2 has been idle since the accident, during which the reactor lost vital cooling water after a combination of human and machine failure. Unit 1, which was shut down for scheduled refueling and maintenance at the time of the accident, was restarted last Oct. 3.

GORDON TOMB, a GPU Nuclear spokesman, said \$615 million of the cleanup

fund had been spent by the end of last year, and \$124 million is budgeted for this year.

The \$1 billion cost is being paid with contributions from insurance companies, other nuclear power plants, research groups, the federal government, the states of Pennsylvania and New Jersey, and plant owner General Public Utilities Corp.

Tomb said removal of the debris is "a critical part" of the cleanup effort. The highly radioactive material is being stored underwater in concrete canisters in a building adjacent to the reactor building. In late May or early June, the canisters will be loaded into shipping casks and sent to the Idaho Nuclear Engineering Laboratory, a federal facility in Idaho Falls.

WHILE TOMB said cleanup operations

are going well, workers continue to have problems with microscopic growth in the reactor water. The growths — algae, fungi and bacteria — have hampered cleanup operations for two months.

In a weekly report on the cleanup, the U.S. Nuclear Regulatory Commission said, "The organic growth in the [reactor coolant system] has progressed to the point where a self-sustaining community exists."

Workers, who stand on a platform high above the reactor core, are having trouble seeing their work through remote television cameras.

GPU Nuclear is continuing to study the problem with the assistance of outside experts, and a long-term treatment plan is not expected for several weeks.

Designer defends reactors

TMI also rips union's report

By Michael Sullivan
Patriot-News

Officials of GPU Nuclear Corp. and Babcock & Wilcox Co. yesterday sharply criticized a report that the Unit 1 reactor at Three Mile Island and seven similar reactors are "extremely susceptible to serious accidents."

The eight reactors, all designed by Babcock & Wilcox, resemble the Three Mile Island Unit 2 reactor in Londonderry Twp., according to a report by the Union of Concerned Scientists.

The worst accident in the history of commercial nuclear plants occurred at TMI-2 in March 1979. After the accident, the U.S. Nuclear Regulatory Commission ordered modifications to 90 other reactors in the United States.

The union's report, submitted to the NRC last week, claims that long-term safety measures have not yet been implemented at eight reactors designed by Babcock & Wilcox.

"Eight nuclear reactors currently licensed to operate are extremely susceptible to serious accidents," the union said in a summary of its report. The union accused the NRC of failing to correct safety hazards and allowing "a set of Band-Aid fixes."

All short-term and most long-term modifications required by the NRC were completed at TMI-1 before its restart, according to Lisa Robinson, spokeswoman for GPU Nuclear Corp., TMI plant operator.

"Of those [long-term modifications] that remain, all the NRC has required has been completed, and the rest are being completed on a schedule approved by the [NRC]," she said. "We are confident the plant is safe — period."

The other seven reactors cited by the union are Arkansas 1 near Russellville, Ark.; Crystal River at Crystal River, Fla.; Davis-Besse at Toledo, Ohio; Oconee 1, 2 and 3 at Greenville, S.C.; and Rancho Seco at Sacramento, Calif.

Robert Pollard, nuclear safety engineer for the union in Washington, D.C., cited as an example of susceptibility to an incident the Rancho Seco nuclear plant, in which 11 malfunctions and safety problems occurred in less than an hour. The problems included failure by operators to control equipment used to cool the reactor, he said.

"Accidents that pose a significant safety risk to the public still occur regularly at the B&W plants," Pollard said. "Because of their unique design, events that would be innocuous elsewhere can have severe consequences at B&W plants," he said.

John MacMillan, senior vice president for nuclear power and technology with Babcock & Wilcox, said the incident at Rancho Seco posed "no nullification of safety to the general public, and there was no significant damage to the plant."

"I have serious problems with what [Pollard's] conclusions are," MacMillan said.

Commitments to the NRC timetable for modifications are the responsibility of each nuclear plant, MacMillan said.

An NRC spokeswoman said her office is unfamiliar with the scientists' report, but she said the agency last month began a year-long review of safety conditions at the eight plants.

The review was initiated by the NRC because of the sensitivity of the plants to "transients," or mishaps that are expected to occur from time to time, according to NRC officials.

"We believe the units have operated reliably, and we know they have operated safely," MacMillan said. "Perhaps out of the evaluation that the NRC is doing, some continued improvements will be made."

Kay Pickering, spokeswoman for the anti-nuclear citizens' group Three Mile Island Alert, said her group has asked Pollard to visit central Pennsylvania on March 28.

Pollard will discuss his group's concerns about the operation at Three Mile Island, she said.

Court aid sought to spur TMI fund

By Frank Lynch
Patriot-News

Members of a local citizens group, saying they are "extremely dissatisfied" with the way the Three Mile Island Public Health Fund is being handled, have asked a federal judge to intervene.

"We have asked for court assistance because this is a matter of extreme importance," said Kay Pickering of Three Mile Island Alert, the group that filed the request with Judge Sylvia H. Rambo.

TMI's chief complaint is with the handling of the fund by its administrators, the Philadelphia law firm of David Berger.

TMI says Berger and his sons, David and Jonathan, have failed for the most part to spend the money on worthwhile public health projects, and noted the money will be lost if not spent by November.

The \$5 million fund was set up in 1981 with part of a \$25 million settlement paid by the owners and builders of TMI for damages in wake of the March 1979 accident at TMI-2.

Under terms of the settlement, approved by Rambo, the fund's money must be committed to research and public education on radiation by November 1986. If not, the money is returned unspent.

TMI attorney Joanne Doroshow noted the deadline to spend the fund: "That's why we're taking action right now."

In its letter, TMI asked Rambo for a conference or a court hearing "so that everybody can get together and work this thing out," Doroshow said.

"Generally, we have a lot of problems with the way they have handled both the fund and the community, the people they are supposed to be representing in this case," Doroshow said. "We have



Judge Sylvia H. Rambo
Approved settlement

had problems for some time. It looks like the money is not going to be spent."

With interest that has built up over 4 years, Doroshow estimates the fund now amounts to \$7 million.

The Bergers were unavailable for comment last night.

In the letter to Rambo, TMI cited "misrepresentations, failures to fulfill promises, isolated decision-making, and generally condescending attitudes by the Bergers" toward area residents.

The fund so far has committed more than \$1 million to research and education projects.

Last year the fund commissioned Columbia University epidemiologists to conduct two 2-year studies on what effects the TMI accident had on pregnancy outcomes and on cancer cases. The cancer study will cost about \$243,000 and the pregnancy research will cost about \$400,000.

Fine on GPU to be enforced

Washington Bureau

WASHINGTON — The Nuclear Regulatory Commission decided yesterday to fine GPU Nuclear Corp. \$64,000 based on 3-year-old charges by a Three Mile Island Unit 2 senior engineer that he was harassed and intimidated.

The NRC Inspection and Enforcement Office announced the fine last August, but delayed its imposition until GPU Nuclear appeals could be evaluated. The company now has 30 days to pay the fine or request a formal hearing.

Richard D. Parks claimed that GPU Nuclear and its chief accident cleanup contractor at TMI-2, Bechtel North American Power

Corp., were short-cutting safe procedures in violation of NRC regulations. After he held a national news conference here, Parks contended that his superiors retaliated by, among other things, subjecting him to intensive questioning and suspending him from his job.

GPU Nuclear denied both the harassment charges and the claim that serious violations of safety procedures occurred.

The NRC is still reconsidering whether or not to upgrade a non-fine reprimand it imposed on GPU Nuclear for the apparent violations. NRC General Counsel Herzog H.E. Plaine had indicated the NRC would reconsider the original citation more than a year ago.

Sunday Patriot-News, Harrisburg, Pa., March 21, 1986.

TMI-1 leak called 'of no consequence'

United Press International

A small amount of radioactive gas escaped into the atmosphere at the Three Mile Island nuclear power plant yesterday during an "unusual event" at the Unit 1 reactor, the plant's operator said.

Douglas Bedell, a spokesman for GPU Nuclear Corp., said the plant was being gradually shut down for testing and was in a "cool-down mode" when the incident occurred. No one was injured.

Bedell said the "unusual event," which is the lowest emergency classification in the nuclear industry, occurred shortly after 3 a.m. when a relief valve released radioactive gas and tripped an alarm at the plant.

A TECHNICIAN was routinely drawing a water sample from the reactor's coolant system at a sink when the relief valve, on the pressurized sample line, released the radioactive gas, Bedell said.

The line had more than the

normal pressure at the time because plant operators were removing gases from the cooling system as part of the normal shutdown procedure, he said.

"The release into the sample sink area caused a radiation monitor alarm to go off in the Unit No. 1 auxiliary building," Bedell said. "The radioactive gas then passed through a series of filters before being vented from the plant."

BEDELL SAID the amount of radioactivity released was so small that it was undetectable by environmental monitors outside the plant. He estimated the release outside the plant at a fraction of 1 percent of the quarterly limit for airborne releases set by the U.S. Nuclear Regulatory Commission.

"It was really of no consequence," Bedell said, adding it was "nowhere at all near any kind of limit."

The Unit 1 reactor was at zero power when the incident occurred, Bedell said.

TMI defendants ask September trial

By Mary Warner
Sunday Patriot-News

The defendants in the massive Three Mile Island litigation are calling for a September trial in which a jury would decide only two questions: How much radiation escaped during the March 1979 accident and where did it go?

Those are among the questions common to all 1,917 claims now pending in Dauphin County Court against the owners and designers of the plant in Londonderry Twp.

The plaintiffs say the accident caused them distress and exposed them to radiation that caused cancer, birth defects and other ailments. The defendants say not enough radiation escaped to have caused any illnesses.

ALFRED WILCOX, attorney for TMI owner General Public Utilities Corp. and the other defendants, said in a report filed in court recently that the highly technical issues surrounding radioactive emissions should be considered separately.

He suggested a Sept. 22 trial date, and said it would probably take a month or two.

If the jury concluded "that the emissions were in fact approximately what the President's Commission, the Nuclear Regulatory Commission, the Interagency Task Force and other qualified investigators found them to be," the claims probably would be dropped or dismissed, Wilcox wrote.

IF THE jury were persuaded by plaintiffs' experts who said the emissions were more dangerous, then further trials could consider individual claims, he wrote.

Most of the TMI claims have been filed in the past year, and most of them by attorneys Lee Swartz of Harrisburg, Arnold Levin of Philadelphia and Lewis Terasi of Pittsburgh.

Swartz said last week that he and Levin would oppose Wilcox' plan, but Swartz declined to discuss his rationale until he has filed his response in court.

Wilcox wrote that his plan would avoid the prospect of the same experts testifying in multiple trials about the same questions.

IT WOULD also "avoid the possibility of irrational results" — with, for example, plaintiffs' experts convincing one jury the emissions blew one way, and other experts convincing another jury they blew the opposite way, he wrote.

The plan also would avoid "the prejudice that results when an emotionally charged issue is tried along with a technically difficult one," Wilcox wrote. "The individual plaintiffs who require that these technical questions be answered, often present tragic human conditions, such as a life-threatening cancer or a seriously defective infant," he wrote.

"The possibility must be reckoned with that even a well-intentioned, well-instructed jury would award damages because they easily understood human loss, but found it difficult to understand radiation measurement and dispersion."

Palladino to retire from NRC in June

By Mick Rood
Washington Bureau

WASHINGTON — Chairman Nunzio Palladino, who sometimes ruefully led the Nuclear Regulatory Commission to sanction the restart of Three Mile Island Unit 1, said yesterday he will retire June 30 at the end of his five-year term.

After asking President Reagan not to reappoint him, Palladino, 69, said he would return to private life, probably in his home state of Pennsylvania, to "pursue some long-deferred personal projects."

Almost from the day he was appointed chairman by Reagan effective July 1, 1981, Palladino found himself buffeted between pro- and anti-nuclear factions. No case better represented what he called the "kind of a no-man's land" at the NRC than the agency's six-year proceeding to approve restart of the TMI Unit 1 nuclear reactor.

On May 29, when the NRC voted to restart Unit 1 by a 4-1 vote, Palladino was in doubt neither about the nuclear technology to which he had dedicated his career, nor about the commission majority's judgment that the plant would be safely operated.

An Allentown native, Palladino was troubled instead by the sentiments of fellow Pennsylvanians opposed to the Unit 1 restart in the wake of the nation's worst commercial nuclear accident at the companion TMI Unit 2 reactor in 1979.

"The decision... has not been



Nunzio Palladino
Eyes personal projects

an easy one for me," said Palladino, his head bent over a carefully prepared statement. "As a Pennsylvanian, I know firsthand the reaction of some of the public during the stressful days following the accident at TMI-2."

As the Unit 1 proceedings dragged on, Palladino implied along the way that the anti-restart sentiment of elected officials and the public would somehow be taken into account.

Palladino duly noted in his May 29 opening statement: "Congress... has directed the NRC to make

decisions regarding the licensing of nuclear reactors, such as this one, on the basis of its own expert health and safety judgment and analysis of whether the detailed regulatory requirements of the commission have been satisfied.

"Thus, while we are aware of the sentiment of many members of the public, the commission must base its decision to authorize restart on its conclusion that there is reasonable assurance that this plant will be safely operated."

On three or four occasions after Palladino became NRC chairman, a commission majority appeared ready to vote in favor of restarting Unit 1. But as Palladino said many times, "things kept coming up" to cast doubt on TMI operator GPU Nuclear Corp.

By May, however, Palladino's argument held sway — that GPU Nuclear was a new company vastly improved over Metropolitan Edison Co., plant operator at the time of the Unit 2 accident. GPU Nuclear had segregated itself from the questionable personnel and shoddy procedures of the past.

Palladino's drive to get a pro-restart vote was smoothed when President Reagan appointed retired Navy Vice Adm. Lando W. Zech Jr. to the NRC in July 1984. Zech was once a nuclear submarine commander and gave Palladino three solid restart votes along with Commissioner Thomas Roberts.

Zech has tended to side with the nuclear industry on key commission votes more than Palladino,

and speculation is that Zech may be the Reagan administration's choice to succeed Palladino next June.

While 25 new nuclear plants have been licensed during Palladino's tenure, he occasionally has drawn fire from both White House and nuclear industry officials. They viewed as dilatory the commission's pace at easing safety regulations.

Palladino has not hesitated to publicly scold the industry for careless plant designs, sloppy construction practices, harassment of quality assurance inspectors and poor record keeping.

On the other hand, nuclear power critics complained that Palladino was too close to the industry. They contended the chairman's primary interest was reviving the nuclear option that was nearly dealt a fatal blow by the TMI Unit 2 accident.

Before his appointment to the NRC, Palladino had been dean of the Pennsylvania State University College of Engineering. He served both as a private consultant and on public committees overseeing nuclear power.

Before that, as a nuclear engineer for Westinghouse, Palladino headed teams that designed reactor cores of the USS Nautilus and the first commercial nuclear plant at Shippingport.

Associated Press reports were used in the preparation of this story.

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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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315 Peffer Street, Harrisburg, Pa., 17102

the FORUM

The Patriot, Harrisburg, Pa., Monday, Nov. 4, 1985

TMI plant a shoddy job

EDITOR:

THIS IS in response to the article by Vermont Royster about "Anti-TMI hysteria" which appeared in the Patriot on Oct. 29. In it, he cites a book by Bernard L. Cohen, which in turn was endorsed by two Nobel laureates.

Please note that I am not a knee-jerk anti-nuke. My concerns about Three Mile Island stem from a profound distrust of the craftsmanship of the people who build nuclear plants, and of the competence and integrity of the owners, managers and operators of the plant. None of the gentlemen mentioned in the first paragraph lives in the Harrisburg area, so they most likely have not read the numerous local press reports about leaking coolant pipes, control panel fires, etc., in the few short weeks since Unit 1 was allowed to restart.

American pride of craftsmanship, corporate responsibility, and quality consciousness seem to have gone down the drain. I'm sorry, but I'd feel more comfortable with TMI if it had been designed by French engineers, built by Japanese workers, and were being run by German operators.

—S. Eckardt,
Dauphin

The Patriot, Harrisburg, Pa., Wednesday, Dec. 4, 1985

TMI incidents

EDITOR:

TMIA reported that the public is not being informed about the many problems at TMI Unit 1. Add these to the problems which are reported, and the fact that, contrary to public belief, the Nuclear Regulatory Commission is no longer on a 24-hour surveillance program, we most definitely have cause for deep concern.

Listed below are just some of the problems listed in the NRC's weekly status reports:

1) Damaged drain lines; 2) faulty steam generator tubes; 3) radioactive releases into our environment; and 4) a leak of 150 gallons of primary water from the makeup and purification system which was not reported by General Public Utilities to the NRC until the following day.

As many times as Doug Bedell, spokesperson for GPU Nuclear, wishes to say that these problems are typical of operating nuclear power plants, I will say that TMI is not a typical nuclear power plant, and never will be because of the accident there in 1979.

Furthermore, another nuclear power plant's management would be slow to admit to similarities with GPU and TMI, where management integrity and competency are still a question in the minds of the people.

I am anxious that the NRC's present tolerance level for mistakes on the part of GPU and its employees is much too high, for our well being. Even if they do decide that the licensee should cease to operate, does Mr. Kane, director of operations of restart staff at Unit 1, for the NRC, have the power to stop operations immediately? I believe not. It appears that he is too bogged down by his own bureaucracy and by the present administration's policy to promote nuclear power at all costs.

GPU Nuclear must still receive authorization from the NRC to proceed with operations once it reaches 100 percent power. I sincerely hope, for our sakes, that the commissioners in Washington are abreast of events. We hold them totally responsible for any negative outcome of operations at TMI.

—Frances Skolnick,
Lancaster

The Patriot, Harrisburg, Pa., Friday, Feb. 26, 1986

TMI 'events'

EDITOR:

In my opinion, TMI stands for "terror," "mismanagement," and "irresponsibility."

Voters had the chance to voice their desires concerning the restart of Unit 1. Money must speak louder than votes, since good old Unit 1 is back to full power.

The word "unusual" is defined as uncommon or rare. However, the people behind TMI have given a new meaning to the word. Calling the almost-daily malfunctions of the plant "unusual events" seems rather audacious and ironic from my little corner of the world.

Whatever they call them, these events are all too common, and most people's attitudes about them are, unfortunately, complacent. The release of radioactive elements into the environment, if only considered on a daily basis, may not be harmful. On the other hand, the cumulative result is a contaminated environment.

If only the people at TMI would take some responsibility for their actions. They might start learning from their mistakes. Instead, they fail to see the health risks involved and continue to "play God" with the people of Pennsylvania.

Nuclear energy may be the energy of the future, but it certainly is not the answer to today's energy problems until the technology exists to run it safely. We should take some advice from Orson Wells and start no nuclear plants before their time.

—Cindy Weaver,
Harrisburg

TMI employees aid Scouts' badge quest

For a fifth year, employees of the Three Mile Island nuclear station will help Boy Scouts from nearby counties earn the Atomic Energy Merit Badge.

Eight-hour programs of instruction for the badge will be held at TMI's training center March 15 and Oct. 18.

Twelve TMI employees have volunteered to teach the Scouts about reactor operation, radiation and other aspects of nuclear energy. The daylong session will include lectures by representatives of various departments at TMI, slide programs and videotapes and practical exercises.

Last year 112 Scouts and 20 leaders attended the merit badge classes, and 85 successfully completed the requirements. Since the program began in 1982, 279 Scouts have earned the badge.

Scouts from the Lancaster-Lebanon, York-Adams, Keystone and Hawk Mountain councils are invited to contact Mary Ann Williams at the TMI Visitors Center.

The Patriot, Harrisburg, Pa., Wednesday, March 13, 1986

TMI Unit 1 shutdown slated

Three Mile Island's Unit 1 will be shut down Friday for six weeks of maintenance and testing of plant systems, officials said.

The outage was scheduled a year ago as part of the TMI-1 restart program. The unit was restarted Oct. 3, 1985, after being idle for 6½ years since the accident at its sister reactor, Unit 2.

Unit 1 was running at 100 percent power yesterday, generating about 850 megawatts of electricity

an hour. Unit 1 has produced 2,128,767 megawatt hours of electricity between restart and March 12, officials said.

During the outage, engineers will examine electronically the heat-exchange tubes in Unit 1's two steam generators. The process, known as eddy current testing, is a followup to repairs done on the generators in 1983. Other maintenance and testing also will be done.



Three Mile Island Alert

Island Updates

News Watch on the Harrisburg Area

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

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 Elyn 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 Doroshow, 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's 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

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?"

Doroshow 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," Doroshow said.

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

Doroshow said GPU "used this report to convince elected officials. We knew it was a whitewash, 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."



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.

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 than 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 passing 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

voted 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 Knapp 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 Doroshaw, 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 Doroshaw, 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, Doroshaw 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."

Doroshaw 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.

Doroshaw 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 Doroshaw, 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, or 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 have 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 strenuous going off in Harrisburg. I was walking across the Mulberry Street Bridge then."

Julia Nace of Elizabethtown 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 Drunsic, a nurse at Harrisburg Hospital, said, "Well, I lived 2½ 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 Oblich 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.



Denton

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 flies 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 Doroshov, 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.

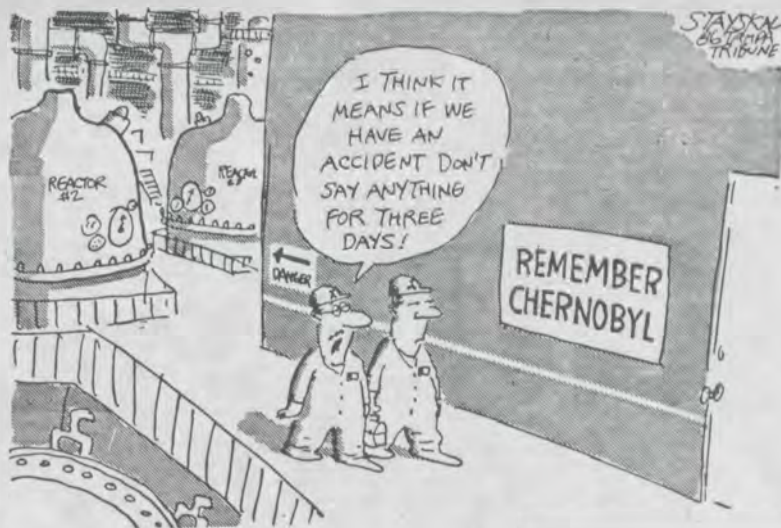
She said, "As far as TMI goes, we had a serious accident here [at Unit 2] in 1979. But it demonstrated a lot of things, the most significant is that the way they [U.S. plants] are designed is that they are designed for safety. Our containment building acted as it was designed to do."

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 2-1 approval by local voters of a public referendum in 1982 against restart of Unit 1.

Sunday Patriot-News, Harrisburg, Pa., April 20, 1986

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.

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, 1986

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 Patriot, Harrisburg, Pa., Wednesday, May 28, 1986

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 canisters 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, 1986

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, June 25, 1986

Ex-staffer at TMI airs test actions

By Frank Lynch
Patriot-News

A former Three Mile Island training instructor denies that he cheated on a 1981 Nuclear Regulatory Commission exam.

Robert Husted, who is using a hearing before an NRC administrative law judge in an attempt to clear his name and regain his job, said an incident in which he allegedly sought the answer to a question was simply "a rhetorical statement" he made during the test.

Husted, now a special projects assistant for TMI operator GPU Nuclear, is barred from operating TMI's Unit 1 or training other operators.

In a 1983 settlement with the state, GPU Nuclear agreed not to use Husted in those capacities. Also, an NRC appeals board in 1984 ruled that Husted could not operate TMI-1 or train operators, as a condition for TMI-1's restart.

Gary Milhollin, an NRC-appointed "special master" who probed 1981 incidents of exam-cheating, reported that Husted displayed "lack of forthrightness" and a "poor attitude toward the hearing process" during Milhollin's investigation. He did not accuse Husted of cheating, and recommended no punitive action.

Husted's hearing, being held this week in the South Office Building, was granted by the NRC last September. Should Husted prevail, the appeals board condition barring him from administrative or training duties would be vacated.

Husted cannot get his old job back unless GPU Nuclear and the commonwealth dissolve their 1983 agreement. A spokesman said Gov. Dick Thornburgh favors keeping the agreement intact.

On Monday, an NRC investigator testified he was told by another operator that Husted "had solicited" an answer to an exam on April 1, 1981. The investigator said because of other information he had, he "didn't attach much importance to" the allegation, and added he "didn't mean to infer that Husted had cheated."

Under questioning yesterday, Husted said that during the test he "came across an answer that he had not prepared for, and said aloud, 'What the hell is this?'" He termed it "a rhetorical statement" and not an attempt to get the answer.

Also yesterday, presiding NRC administrative law Judge Morton B. Margulies barred Milhollin from testifying on Husted's attitude during Milhollin's investigation.

The request for the testimony was by TMI Alert, an anti-nuclear group.

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-

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., 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

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 ultimately disposed of.

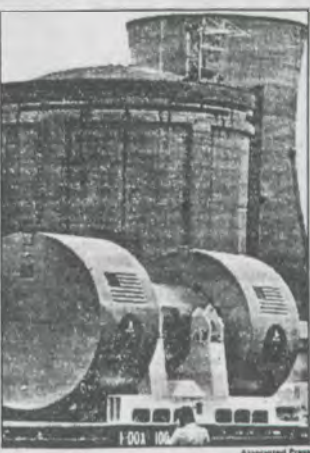
Willis Bixby, TMI program manager for DOE, said shipment of the highly radioactive material across the country will be safe.

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 main route will be notified.



Casks for TMI debris on display

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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 bullheaded 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 coverup 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



Three Mile Island Alert

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TMI A

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The Patriot, Harrisburg, Pa., Wednesday, October 22, 1986

Two setbacks dealt to group when judge OKs TMI study

Funds for better radiation monitoring rejected

By Frank Lynch
Patriot-News

Over the objections of several locally elected officials and a citizens' group, a federal judge has approved a \$600,000 study of the emergency planning system for Three Mile Island.

In a memorandum signed yesterday, U.S. District Judge Sylvia H. Rambo also said money won't be set aside from the Three Mile Island Public Health Fund for a better radiation monitoring system around the Londonderry Twp. nuclear power plant.

The judge's order is a double setback to the citizens' group, Three Mile Island Alert, and seven local officials, all of whom had asked Rambo to commit fund money to the monitoring system instead of the emergency plans.

Kay Pickering, office coordinator for TMI Alert, said Rambo's decision "is horrendous. I'm shouting. I'm really upset."

"Why have another evacuation plan? It doesn't make any sense. She didn't listen to the people."

Dauphin County Commissioner Lawrence J. Hochendoner, who with six other officials petitioned Rambo to disallow the emergency plan project, said, "I'm very sad about that decision. It flies in the face of what the elected representatives have asked for."

Rambo oversees all expenditures from the Public Health Fund, set up in 1981 with \$5 million paid by TMI insurers to stop litigation resulting from the March 1979 accident at Unit 2.

The administrators of the fund, Philadelphia attorney David Berger and his sons, Daniel and Jonathan, say about \$4.5 million has been committed so far to health programs or studies. Several million dollars remain in the bank because of accrued interest.

In July, Rambo welcomed response to the proposal to study emergency plans. She said none of them "raise any serious doubts as to the validity of the proposed project."

The study will be conducted over 18 or 20 months by the Center for Environment, Technology and Development (CENTED) at Clarke University in Massachusetts.

The researchers want to examine the characteristics of nuclear reactor accidents, the emergency decision structure now in place around TMI, and the current emergency response system. The team will make recommendations to federal, state and local governments, all of which have emergency evacuation plans.

The Bergers recommended the emergency planning study, citing recent scientific advances in analyzing nuclear accidents, the "sensitivity" of area residents to nuclear power issues, the need to update emergency plans, and the impact of the April disaster at the Chernobyl reactor in the Soviet Union.

The local elected officials, in a petition they filed with Rambo in August, say the project is a "futile endeavor" and a "waste" of health fund money because emergency plans already exist.

They added that the value of any plan CENTED develops could be negated by the "whim" of federal officials, whose cooperation is essential.

Rambo, noting the the Pennsylvania Emergency Management Agency has agreed to cooperate with the study, said, "the approval of the federal government and of other political bodies is not a factor within the court's control. Therefore, the distrust that the [local] officials have of the entities will not prevent approval."

The officials also asked that the \$600,000 be spent on the monitoring equipment around TMI. But, Rambo wrote, the Bergers argue "that radiation monitoring is the focus of a separate study, which does not appear to recommend the purchase of monitoring equipment by the fund."

In addition to Hochendoner, the officials who asked Rambo not to allow the project were Dauphin County Commission Chairman Frederick S. Rice; Cumberland County Commissioner Marcia Myers; state Sen. John Shumaker, R-Grantville; state Rep. Peter C. Wambach Jr., D-Harrisburg; state Rep. Bruce Smith, R-Newberry Twp.; and Harrisburg City Council President Reizdan B. Moore.

The Patriot, Harrisburg, Pa., Tuesday, October 28, 1986



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TMI health fund

Why were local interests ignored?

THE ONLY problem we have with the petition filed by local officials with the U.S. Middle District Court to gain control of the Three Mile Island Public Health Fund is that it comes five years too late.

We have never understood why this \$5 million fund, gained in a suit growing out of the TMI accident and intended to be used to support research and public education on radiation, has been permitted to be spent without even consulting local officials and citizens. These decisions have been left in the hands of the court-appointed administrators, David Berger, a Philadelphia lawyer, and his sons, Daniel and Jonathan, who brought the original lawsuit against the owners of TMI. U.S. District Judge Sylvia H. Rambo oversees the fund and has the final word on all expenditures.

The petition, submitted by a bipartisan cross-section of elected city, county and state officials from the area, asks for a full public accounting of all money spent from the fund and the removal of the Bergers as administrators. It was prompted by the latest incident in which local views on how money remaining in the fund can best be spent were rejected by the court.

In that instance, TMI Alert and a group of local officials opposed the expenditure of \$600,000 from the fund for a study of the emergency-planning system at TMI proposed by the Bergers and urged that the money be used to upgrade the radiation monitoring system around the nuclear plant. Judge Rambo ruled in favor of the Bergers.

The study of emergency planning is one

of several that have been funded with the \$5 million. Not one of the costly studies, however, has been widely available to the public in any form, nor is there the slightest indication that any of them have materially increased knowledge of the accident and its consequences to the benefit of the public.

Indeed, the fund is one of the more bizarre outgrowths of the TMI accident. Its ostensible purpose is to benefit the "public health," yet after five years of management by Berger and sons local officials and people are totally at a loss to identify a single public-health benefit resulting from it.

THE FUND never should have been allowed to function totally detached from those it was intended to benefit. For years its expenditures have been irrelevant to the needs and concerns of the people who have had to adjust to the worst accident in the history of American commercial nuclear power. While it is bad enough that area residents have no control over the operation of the nuclear plants in their midst, it is a further travesty that they cannot dictate or even influence the expenditure of funds intended for their benefit.

Most of the fund already has been spent but it isn't too late to demand that the Bergers tell the public what the \$5 million bought that was spent in their name. We support the petition brought by our local officials and urge them to persist in their efforts until they obtain the control over the fund they should have had from the very beginning.

Ouster of TMI fund administrators sought

By Denise Laffan
Patriot-News

A coalition of local elected officials wants to remove the TMI Public Health Fund's administrators, contending they are incompetent and fail to work in the public interest.

An ad hoc group — which includes county commissioners, state legislators and City Council members — is expected to file a petition in U.S. Middle District Court today, requesting a full public accounting of all the money spent from the Three Mile Island fund and petitioning for the removal of court-appointed administrators David Berger, a Philadelphia lawyer, and his sons, Daniel and Jonathan.

"The suppression of information is critical in this issue," Dauphin County Commissioner Lawrence J. Hochendoner said at a news conference called yesterday to announce the action.

State Rep. Peter C. Wambach Jr., D-Harrisburg, said the petition also will register an objection to a recent decision by U.S. District Judge Sylvia H. Rambo in which Rambo approved spending \$600,000 to study an emergency planning system for TMI.

"As local officials, I think we have an obligation . . . to say we don't agree with this decision," Wambach said.

The officials contend the money would be better spent on a state-of-the-art radiation monitoring system for the plant, and that an emergency plan would duplicate plans already on the books.

Daniel Berger, counsel to the TMI fund, called the charges "preposterous."

He said the group's failure to win its point in court has created a "case of sour grapes."

The petitions began in May when Dauphin County commissioners asked the court to have \$600,000 of the fund spent

on installing a new radiation monitoring system. Rambo denied the request.

The commissioners, along with other elected officials, placed the petition before Rambo again in August in a slightly different form. The group asked Rambo to disallow a request to spend \$600,000, submitted by the Bergers, for a study on an emergency-response plan.

The officials again said they would prefer the money be spent on an improved monitoring system.

Earlier this week, Rambo rejected the arguments made in the August petition and granted the Bergers' request for an emergency plan study.

The local officials argue the need for such a plan pales in comparison to the need for an up-to-date monitoring system.

Berger said he believed the politicians were acting on the advice of TMI-Alert, a watchdog group that he called "extremist."

"[The elected officials] are acting in a personal, individual capacity and not in the capacity of the bodies they serve on," Berger said.

The proposed emergency plan would be the first specifically compiled for the TMI site, he added.

Dauphin County Commission Chairman Frederick S. Rice said he wanted his name included on the petition because he had tired of the foot-dragging. Studies that he was told would be completed by September never appeared, he said.

Rice said he also would like to see the fund audited because no one locally has been told how the money has been spent or how much remains in the fund.

The fund was established in 1981 with \$5 million resulting from litigation against TMI companies. Its purpose is to

support research and public education programs on radiation.

Along with replacing the Bergers, the new petition requests an audit of the fund and an extension of time to spend its remaining money. At the moment, all the money in the fund must be either spent or committed to projects within the next month.

The petition also raises the issue of health studies contracted for by the TMI fund which have never been released to the public.

In addition to Rice and Hochendoner, the petitioners are Dauphin County Commissioner Norman P. Hetrick; Cumberland County Commissioner Marcia Myers; state Sen. John Shumaker, R-Grantville; state Rep. Bruce Smith, R-Newberry Twp.; and Harrisburg City Council members Harriet Braxton and Earl Gohl.

Court orders unlock hospital files for TMI study

By David Stellfox
Patriot-News

Hundreds of central Pennsylvanians may become part of a major study of cancer without their knowledge or consent.

Several area hospitals have opened their patients' records to researchers from Columbia University in New York City.

The researchers are conducting a massive study of cancer cases to determine whether and how they may be related to the 1979 accident at Three Mile Island. They want medical diagnoses on cancer patients and their names and addresses.

U.S. Middle District Judge Sylvia Rambo last week ordered two local hospitals to give the researchers access to patient records.

Spokesmen at Carlisle Hospital and Community General Osteopathic Hospital said they previously declined to open their records because that action would violate patient confidentiality and state Health Department regulations on the release of medical information.

Earlier this year, Rambo also ordered Columbia Hospital in Lancaster County to open its records to the researchers.

The scientific study is being paid for by the Three Mile Island Public Health Fund, a corporation established to administer \$5 million in legal settlements that resulted from the accident at Three Mile Island Unit 2 in Londonderry Twp.

A spokesman for the fund last week said fund administrators are negotiating with six more local hospitals for access to their records.

Ultimately, the spokesman said, federal court orders could be used to gain access to records at other hospitals that have refused the researchers' requests for information.

Aware of regulations and ethical considerations hospitals follow, researchers rarely request information, such as names and addresses, that will identify patients. The health fund study, by its nature, requires such information.

The study, covering the years 1975 to 1985, is designed to determine if an in-

crease in cancer has occurred in a 10-mile radius of the TMI plant, and to determine whether any cancer increase was caused by radiation releases from the plant or by increases of stress associated with the March 28, 1979, accident.

Names and addresses are needed to assign each cancer case to a geographical coordinate within the 10-mile zone for the purpose of statistical analysis.

The researchers will consider factors such as distance from the plant, the path of the radioactive plume released and weather conditions and types of cancer in attempting to determine whether any increase in cancer rates is attributable to the radiation or stress.

The study is being conducted by epidemiological experts at Columbia University's Sergievsky Center.

What brought the study into conflict with the hospitals — ethical and privacy considerations aside — is state Health Department regulations that require consent from patients in writing before the re-

lease of their medical records outside the hospital.

However, those regulations are expected "for court purposes."

Hospitals that have not refused the researchers' requests for information apparently have decided that the Three Mile Island Public Health Fund, set up by the court and operating under its auspices, makes the study a "court purpose." That is the position fund administrators take.

Officials at Community General Osteopathic Hospital, however, believe releasing the records would violate the privacy regulations unless it is done under direct court order.

"The legal position of Community General Osteopathic Hospital is that, to provide information on patients without an appropriate court order would be in violation of hospital-patient confidentiality and also current state laws governing confidentiality," said hospital President George R. Strohl Jr.

Neither the researchers nor adminis-

trators of the fund will say which hospitals have or have not cooperated with them, except as it becomes a matter of public record when court orders are issued.

The researchers originally targeted 19 "local" hospitals — those within a 30-mile radius of the plant — and 18 "referral" hospitals in major metropolitan areas such as Philadelphia and Baltimore.

With the two court orders last week, the researchers will have access to records at 22 hospitals.

The researchers assume most midstate cancer patients from 1975 to 1985 would be picked up through at least one of the targeted hospitals.

"Patient confidentiality is a very critical issue," said David Hutton, executive vice president of Carlisle Hospital. "We're always very concerned and work very closely with our lawyers to make sure we're in compliance with the relevant

The Patriot, Harrisburg, Pa., Friday, Sept. 5, 1986

Thornburgh urges TMI-integrity hearing

Associated Press

Gov. Dick Thornburgh yesterday said he has ordered the state to seek a federal hearing into management integrity at the Three Mile Island nuclear plant.

Pennsylvania is appealing a decision by administrative law judge Ivan Smith not to hold a hearing requested by Edward Wallace, former licensing manager for Metropolitan Edison Co.

The Nuclear Regulatory Commission had ordered the hearing last year after Wallace sought to clear his name of allegations that he submitted false information to the NRC in 1979 regarding the TMI accident.

Smith denied the hearing after the NRC staff, which previously

said there was a reasonable basis to conclude Wallace made a "willful, knowing and reckless material false statement," decided it would not press a case against him at a new hearing.

Smith based his decision on an earlier NRC ruling that if no one would make a case against Wallace, no hearing would be held.

The NRC said if evidence was not presented against Wallace, it would lift a requirement in the TMI Unit 1 operating license that the NRC be notified before Wallace could again work at the Londonderry Twp. plant.

"The commonwealth believes that this matter deserves a commission adjudication on the merits, since it involves the management

integrity of the corporate operator of TMI-2," the state said in its appeal to the Atomic Safety and Licensing Board.

Wallace is now employed by GPU Nuclear Corp., which replaced Met-Ed as the TMI operator about two years after the March 1979 accident at Unit 2. The accident, in which cooling water was lost from the reactor and nuclear fuel began to melt, was the worst ever at a U.S. commercial nuclear power plant.

In its petition, the state said the NRC previously said it could not clear Wallace's name without additional evidence, and it was illogical for Smith in his Aug. 19 order to dispense with a hearing and lift the notice requirement in the Unit

1 license.

Not affected by the Unit 2 accident, Unit 1 was returned to service on Oct. 3, 1985.

The alleged false statement dealt with why operators did not recognize that a valve had stuck open and allowed cooling water to escape from the Unit 2 reactor.

Wallace told the NRC that repeated high temperature readings in a drain line below the valve before the accident had nothing to do with operators not detecting the leaking high-temperature coolant through the line at the time of the accident.

Later investigations by NRC staff said the response was contrary to information in Met-Ed's possession.

state regulations," he said.

Daniel Berger, a lawyer with the Philadelphia law firm administering the public health fund at the direction of the court, said last week that all the hospitals are interested in "cooperating with legitimate scientific research," but most are or were concerned about "problems with confidentiality rules of the state Health Department."

Berger said that the researchers, Dr. Mervyn Susser and Dr. Maureen Hatch, "are taking very careful action to preserve the confidentiality."

The study does not involve any direct contact with patients by telephone or in person during the study preparation or in any follow-up to the study, Berger said.

Judge Rambo, in her orders, has directed the researchers to maintain the records "for a limited period of time after publication of the results of the study to permit scientific comment or facilitate further research activity... and thereafter [be] destroyed."

Records from all the hospitals will be destroyed at that unspecified time, Berger said.

No hospitals, with or without a court order, are violating confidentiality, Berger said. "I believe that either way — with or without a court order — is a legitimate way to proceed, particularly in those cases where a court order would be issued," he said.

Berger said court orders could be obtained to open the records of the remaining six hospitals not participating in the study.

Court asked to block mailing of 'prejudicial' TMI report

By Frank Lynch
Patriot-News

A tersely worded court filing accuses the Three Mile Island operator of "insufferable arrogance and egocentricity," and asks a judge to forbid the mass-mailing of a "prejudicial" summary of health effects caused by the 1979 accident.

The memo, submitted yesterday to a Dauphin County judge by attorneys for some 2,000 people claiming health damages from radiation released during the accident, is the most recent volley in a legal pingpong match with GPU Nuclear Corp.

At issue is whether GPU Nuclear should be allowed to mass-mail summaries of "Radiation and Health Effects: A Report on the TMI-2 Accident and Related Health Studies."

The report, which GPU Nuclear commissioned and released this summer, cites various independent studies concluding that radioactive

releases from the March 28, 1979, accident at TMI Unit 2 were such that nobody could have been hurt.

Attorneys for the plaintiffs in the suits against GPU Nuclear last month asked county Senior Judge William W. Lipsitt for an injunction preventing a mailing. The request claimed the mailing would prejudice Dauphin County residents, potential jurors in an upcoming test trial.

GPU Nuclear countered that such an injunction would amount to prior restraint of the company's First Amendment right to freedom of speech.

Company lawyers also argued that a mailing of the report wouldn't sabotage an impartial trial, and that the report would only serve to balance the "sometimes wholly sensational" attention the Londonderry Twp. plant has received since the accident.

The company also complained that the only harm resulting from the accident was "its monetary and operational effects on [plant

The memo, submitted by attorneys for some 2,000 people claiming health damages from radiation released during the TMI accident, is the most recent volley in a legal pingpong match with GPU Nuclear Corp. At issue is whether GPU Nuclear should be allowed to mass-mail summaries of "Radiation and Health Effects: A Report on the TMI-2 Accident and Related Health Studies."

owner] GPU."

The plaintiff attorneys, Lee C. Swartz of Harrisburg and Arnold Levin of Philadelphia, state in their response that GPU "persists with its insufferable arrogance and egocentricity" by proclaiming "that this nuclear disaster turned out to be benign to all the communities surrounding the plant."

They also say that the plaintiffs' right to a fair trial by an impartial jury outweighs GPU's right to free speech, and add that "it taints the trial atmosphere not because it is a report on TMI, but because it is a report produced by a defendant."

Swartz and Levin also say the proposed injunction doesn't prohibit distribution to other audiences or prohibit other means of dissemination of ideas: "It prohibits only the direct contacting of Dauphin County residents by delivering GPU's report directly into their homes."

They also attack a report on which GPU's summary relied, the "Report of the President's Commission on the Accident at Three Mile Island." That report, released in 1979, concluded that the most important effect of the accident was mental stress.

But Swartz and Levin say the report "was deliberately adulterated," and portions suppressed, at the pleading of the late Adm. Hyman G. Rickover.

The attorneys include a sworn affidavit from Jane Rickover, daughter-in-law of the admiral. It says the admiral had asked that the report be "diluted" because the full findings "would have de-

stroyed the civilian nuclear power industry" in the United States.

She said Rickover told her months before he died that he "deeply regretted his action in persuading President [Jimmy] Carter to suppress the most alarming aspects of that report."

GPU officials have admitted to paying \$380,000 to a foundation Rickover started in return for his consulting services to GPU, but deny any impropriety in the relationship.

A GPU Nuclear spokesman said company attorneys are reviewing the plaintiffs' filing. He didn't know if the company would offer a rebuttal.

The trial of 12 test cases has been set for May 4 before Lipsitt. Each side will select six of their best cases to present to the jury.

The cases are part of some 2,000 filed in county court. The suits state that a variety of illnesses — from cancer to headaches — were caused by the TMI accident.

Foes ridicule report by GPU on TMI, health

By Jo Griffiths
Patriot-News

Three Mile Island opposition groups scoffed at a GPU Nuclear Corp. report that no ill health effects have resulted from the 1979 accident at TMI.

"We could write their script for them," said Helen Hocker, co-chairman of the Newberry Area TMI Coalition. "That's their standard reply: there are no problems."

Patricia Smith, Newberry co-chairman, and Joyce Corradi of Concerned Mothers and Women of Middletown, said they do not believe the report will have much credibility with the general public.

"I certainly think it's foolish if they believe the public is going to believe their analysis," Smith said. "I have a problem with the use of statistics. It takes years to get results, and we're still waiting for the results of some of the state health studies that are long overdue."

Said Corradi, "They [GPU] have such an integrity problem. The average citizen isn't going to buy it."

Mary Osborn of TMI Alert said, "It's only a rehash of old stuff. Some of it shouldn't have even been printed because it's been disproved. Anyone well informed on the issue will not believe it."

GPU on Wednesday released a 48-page report stating that not enough radiation was released during the accident at the Londonderry Twp. nuclear plant to have caused any acute health problems.

Long-term health problems also are not expected because of the small amount of radiation involved, the report said.

Among the report's chief findings was that the largest dose anyone living in the area would have received was 100 millirems, far less than the 100,000 millirems generally required before mild symptoms of radiation-induced illnesses start to appear.

The report noted the average American receives about 190 millirems of radiation each year, about half from natural background radiation and the rest from man-made sources.

It also cited state cancer statistics for the five years after the accident, showing fewer cancer

deaths than predicted for that time period. Alleged animal and vegetation problems were due to poor nutrition, disease, drought and other factors, it said.

Hocker said the use of statistics from state studies is inappropriate because some of the studies were flawed. She also questioned the cancer statistics and added that figures of any kind can be "played with."

She said she hears "the opposite from all sorts of other sources."

Osborn said government standards for radiation exposure are based on healthy people. Those standards might not be applicable to unborn babies and the infirm, she said.

In reply to the criticism, Douglas H. Bedell, GPU communication services manager at TMI, said the report was a compilation of findings by government agencies.

"This is not our research, not our conclusions," Bedell said. "The report reflects the consensus of findings of official agencies on the accident. It summarizes what these agencies who are charged with protecting the public said."

GPU officials have said the report may be condensed for mass mailings later this summer or early in the fall.

Copies of the report may be obtained by writing to: Radiation and Health Effects Report, TMI Public Affairs Department, Three Mile Island Nuclear Station, Box 480, Middletown 17057.

The Patriot, Harrisburg, Pa., Thursday, August 7, 1986

NRC rules out use of TMI consultant

By Mick Rood
Washington Bureau

WASHINGTON — The Nuclear Regulatory Commission has ruled out use of a Newark, N.J., consultant in upcoming hearings on the leak-rate falsification case at Three Mile Island Unit 2.

The consultant, Edwin H. Stier, conducted a 14-month investigation into the 1978-79 leak-rate case in September 1985 for GPU Nuclear Corp., operator of TMI.

Stier, a former director of the New Jersey Division of Criminal Justice, again is working for GPU Nuclear, a company spokesman said.

GPU Nuclear used Stier's report in January 1986 as a basis to punish 17 of 24 TMI current employees who participated in or should have known about the leak-rate rigging. Stier concluded the employees kept false records or threw records away when results showed coolant leaking in the Unit 2 primary system in excess of federal regulations.

GPU Nuclear said the offending employees were reprimanded, deprived of one or two weeks' pay and excluded from TMI operating jobs.

A three-member NRC licensing board of Administrative Law Judges James L. Kelley, Glenn O. Bright and Jerry R. Kline told the NRC on May 30 it wanted Stier to be not only a witness but a consultant at prevailing federal wage rates "in the interests of independence and objectivity."

The NRC, in a July 24 order, said, in part:

"[We] disagree with the board's apparent belief that Mr. Stier will appear more independent and objective if the NRC pays him to review [the NRC] staff's work. It seems doubtful that the appearance of a loss of objectivity because of his prior association with GPU Nuclear will be significantly lessened by now having the NRC pay him."

"Finally, the commission is concerned about the possible conflict of hiring Mr. Stier to review staff's report, where staff's report in part reviews Stier's work while employed by GPU Nuclear."

Opponents to the restart of TMI-Unit 1 had contended that leak-rate hearings should have been held prior to the May 29, 1985, NRC restart order to see if existing GPU Nuclear upper management was involved. In his report, Stier concluded, as did the U.S. attorney investigating the case in 1984, that no top managers were involved.

In a controversial decision in February 1985, the NRC decided no leak-rate hearings were necessary but that post-restart hearings should be held.

Of the anti-restart intervenors in the Unit 1 case, only Norman and Marjorie Amoad are participating in the post-restart hearings. Other intervenors have criticized the hearing format because no cross-examination of witnesses will be allowed and no depositions will be taken of witnesses beforehand.

CHERNOBYL

Soviets cite 6 'unbelievable' errors in Chernobyl catastrophe

United Press International

MOSCOW — Six "unbelievable" blunders during safety testing — including the deliberate switching off of emergency shutdown systems — caused the Chernobyl nuclear plant disaster, Soviet scientists said yesterday.

Five top nuclear energy experts addressing a Moscow news conference also raised the official death toll in the April 26 disaster from 28 to 31 with at least another 40 people still hospitalized with acute and potentially fatal radiation doses.

Nearly four months after the accident, the dam-

aged reactor, 600 miles southwest of Moscow, also still is contaminating the atmosphere with radioactive debris and poses a serious threat to drinking water supplies in the Ukraine, the scientists said during the two-hour news conference.

Meanwhile in Washington yesterday, a U.S. critic of nuclear power said the Soviet report describes a comedy of errors in a facility that could have been "run by the Marx Brothers."

Kennedy Maize, senior staff member at the Union of Concerned Scientists, a group frequently critical of the U.S. nuclear industry, characterized the Soviet

report as "rather candid and frank" even though it left some questions unanswered.

"It kind of portrays a comedy of errors," Maize said of the official Soviet analysis of what went wrong. "It seems to be a power plant run by the Marx Brothers. On the other hand, it's not terribly different from what we see in this country when there's an accident."

"Six mistakes were made and if only one was not committed, the accident would never have happened," said Valery Legasov, deputy director of the Kurchatov Atomic Energy Institute.

He said parts of the radioactive fuel dispersed in

the accident — an explosion and fire — are still present as radioactive dust whose particles are carried by winds to areas around the station.

"Air currents are spreading this dust upwards and taking it beyond the territory of the station. It is still spreading beyond the station, unfortunately," Legasov said.

"This emission will be completely contained once the fourth unit is completely entombed" in concrete, a project which is under way.

The facts disclosed yesterday by the scientists

were contained in a government report to be submitted to a meeting of the Vienna-based International Atomic Energy Agency on Monday.

Andronik Petrosyants, chairman of the State Committee on Atomic Energy Use, said, "The errors, the sequence of mistakes were unbelievable."

"It seems like they were trying to simulate an accident and then created one," one Western diplomat said.

Petrosyants said the accident, which the government has said caused \$3 billion in economic losses, was a serious blow to the Soviet nuclear energy program.

The ruling Politburo met yesterday to discuss problems within the nuclear and conventional power industries and ordered the Ministry for Atomic Power to increase its work rate to bring more units on line by winter, the official Tass news agency said.

Legasov listed the six errors in the accident and said they were committed while engineers carried out an experiment designed to improve the safety of the power plant by seeing how quickly a backup diesel generator that operates the cooling system could be

switched on if a system broke down.

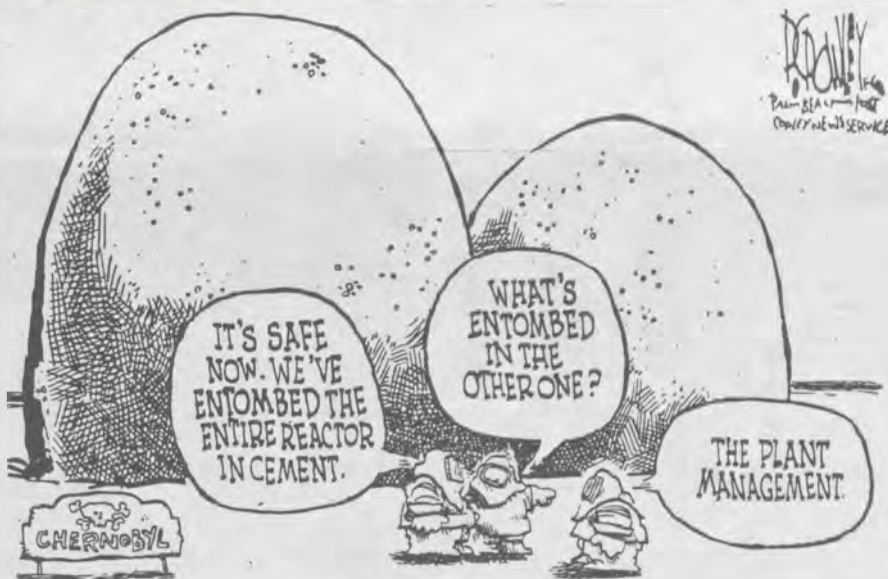
He said engineers first cut the level of the nuclear reaction inside the core below permissible levels. The reactor power capacity also was dropped below recommended levels, with technicians losing the ability to control the core's reaction and trigger emergency shutdown systems.

The third error was that all four water pumping systems that cool the reactor and help control it were switched on. Normally, only three systems operate at once, but with the reduced power output of the reactor and all four pumps switched on no water made it into the cooling system.

The fourth mistake described as "fatal" by Legasov was that engineers switched off the automatic shutdown mechanism that closes the reactor when water and steam levels fall below normal.

The engineers committed error number five when they switched off a second defense mechanism — another automatic shutdown mechanism triggered when steam pressure levels fall below normal.

The final blunder came when the engineers disengaged the emergency backup cooling system, Legasov said, adding that was done to allow completion of the experiment.



The Patriot, Harrisburg, Pa., Thursday, July 31, 1986

Party boots ex-Chernobyl engineer

Associated Press

MOSCOW — The Communist Party expelled the former chief engineer of the Chernobyl nuclear plant for conducting an experiment that led to the April 26 reactor disaster, a Ukrainian newspaper reported.

In addition, a Ukrainian nuclear safety official was given a strict reprimand for carelessness after the accident, the newspaper Pravda Ukrainy said.

The party expulsion followed the firing of a state committee chairman, two deputy ministers and a series of local officials in the Chernobyl disaster, which left 28 people dead and spread a cloud of radiation that eventually went around the world.

The July 27 edition of the Ukrainian party newspaper, received in Moscow yesterday, reported that the chief engineer, identified only by the last name Fomin, was expelled by the ruling Central Committee of the Ukrainian republic's Communist Party.

The newspaper said Fomin was punished for "grave mistakes and miscalculations at work" and for "conducting an experiment on the No. 4 reactor which led to an accident with grave consequences without the required preparation and agreement with responsible organs."

Expulsion from the Communist Party is a serious form of punishment that can affect all facets of daily life.

Those expelled normally lose their jobs and are blocked from career advancement. They also lose privileges ranging from preferential housing to the right to shop at special stores carrying goods unobtainable elsewhere.

Party expulsion has sometimes been a prelude to criminal charges. The ruling Politburo of the Soviet Union said in a July 19 report that those deemed responsible for the Chernobyl accident will be prosecuted.

The Patriot, Harrisburg, Pa., Thursday, Sept. 4, 1986

NRC hails Soviets' candor on Chernobyl

By Mick Rood
Washington Bureau

WASHINGTON — Nuclear Regulatory Commission officials yesterday would not speculate about cancer deaths that may result from the Soviet nuclear accident at Chernobyl, but praised the Russians' candor in sharing information.

An NRC staff team that attended an international meeting in Vienna, Austria, last week to assess the April 26 accident briefed the commission for 2½ hours.

Harold Denton, director of the NRC Office of Nuclear Reactor Regulation, said the Chernobyl plant could not have been licensed in the United States.

The NRC staff is preparing a "lessons learned" report that will compare the Soviet catastrophe to U.S. operations, but Denton said he "didn't want to tick off the differences" between the two countries' safety designs.

Denton said he would "like to keep the door open" to international information sharing rather than assert U.S. superiority in nuclear safety.

"I'm very encouraged to see them interested in plant safety," Denton said, noting the Soviet Union has shut down half of its nuclear capacity for safety improvements.

In the short run, Denton said he does not "see areas where immediate changes in [U.S.] reactor operation" need to be made.

If he has learned anything, Denton said, it is "the value of containment" around a reactor core. He said it is estimated that more

than a million times more radioactive iodine escaped in the Chernobyl explosion than during the 1979 nuclear accident at the Three Mile Island nuclear plant in Londonderry, N.Y.

The Chernobyl Unit 4 reactor is said by American experts to have considerably less containment protection than common U.S. reactors.

Denton said the Russians chose the Chernobyl design 25 or 30 years ago because the country did not have the industrial capability to produce reactor vessels similar to those used in the United States. The graphite core, which is more vulnerable to what he called "radioactivity incidents," is much easier to build, Denton said the Soviets admitted.

As Commissioner James A. Sells asked a series of questions about cancer death projections, NRC Executive Director of Operations Victor Stello said that's "not an issue to be solved here today."

Expert projections in Vienna ranged from 6,500 cancer deaths, the Soviet estimate, to more than 40,000 deaths that will be caused by radiation exposure from the Chernobyl accident.

"It would probably take another conference to figure it out," Denton said.

When Aesetline continued with attempts to get speculation on Chernobyl ramifications on U.S. safety regulations, Stello said it is "premature to shoot from the hip" before the NRC staff report is done. Any lessons learned for U.S. plants will be carefully thought out before the report is done sometime before December, Stello said.

The Patriot, Harrisburg, Pa., Monday, August 18, 1986

Nuclear disasters

Experts will discuss TMI, Chernobyl

United Press International

NEW YORK — Soviet and American scientists will examine the Chernobyl and Three Mile Island nuclear disasters in a satellite-linked teleconference next month.

Panels of experts in Moscow and San Francisco will discuss nuclear safety, the potential for bilateral cooperation on nuclear fusion research and the problems of international monitoring and emergency warning systems in case of a catastrophe. Newsweek reported in its Aug. 25 issue, released yesterday.

The 2½-hour discussion will be sponsored by the American Association for the Advancement of Science, the Soviet Academy of Sciences and the Esalen Institute's Soviet-American exchange program. Portions will be telecast by Cable News Network, the magazine said.

The date of the teleconference was not reported by the magazine and was not immediately known.

A fire in a reactor at the Chernobyl nuclear plant April 26 sent a cloud of radiation drifting across much of Europe and eventually over the United States and Japan in history's worst nuclear power disaster. The death toll from the accident stands at 30.

The worst commercial nuclear accident in the United States occurred March 28, 1979, in Unit No. 2 at the Three Mile Island nuclear power plant in Londonderry Twp., Pa. The undamaged Unit No. 1 also was shut down following the accident.

The radiation released at TMI was not enough to cause public health damage, according to a joint study by three federal agencies.

The Patriot, Harrisburg, Pa., Tuesday, Sept. 16, 1986

Soviet play on nuclear disaster reported

MOSCOW — The world's worst nuclear power accident, the Chernobyl disaster, is coming to the Soviet stage.

According to the September issue of the monthly literary and theater magazine Znamya, a play about Chernobyl titled "The Sarcophagus" will open in several Soviet cities in October.

The biting morality play reproduced in full in Znamya, was written by Vladimir Gubarev, a journalist assigned to cover the tragedy for the magazine.

He was told to produce a moving journalistic account of the Chernobyl disaster, but wrote a play instead.

"My instructions were to write about everything that happened and write about it openly," Gubarev said. "The best way to write about it was to produce a tragedy."

The Patriot, Harrisburg, Pa., Friday, July 18, 1986

Gekas pushes application of lessons from Chernobyl

Washington Bureau

WASHINGTON — Rep. George Gekas, R-Harrisburg, yesterday introduced a House resolution that urges federal agencies and the nuclear industry to apply safety lessons learned from the Soviet nuclear accident at Chernobyl to reactors in the United States.

The joint congressional resolution is advisory and would not carry the force of law.

"The Nuclear Regulatory Commission, the Department of Energy and the American nuclear industry should attempt to ascertain the shortcomings of the Chernobyl nuclear facility and the errors of officials in dealing with that accident

to prevent such an occurrence from taking place at an American nuclear facility," the Gekas resolution says.

The proposal acknowledges that U.S. assessments of the Soviet accident on April 23 already are under way. But Gekas said he wanted to ensure that any safety

lessons from the Chernobyl disaster are applied to American nuclear plants.

NRC Chairman Lando W. Zech is urged in the resolution to initiate "immediate action" to implement study recommendations to prevent Chernobyl-type accidents in the United States.

Nuclear route opposed

Pittsburgh asks detour on TMI wastes

From staff and wire reports

Pittsburgh City Council has adopted a resolution asking federal authorities to reroute trains intended to carry radioactive waste from the Three Mile Island nuclear power plant.

The U.S. Department of Energy, however, said the route, which takes the trains through Pittsburgh on a 1,600-mile, 10-state trip to Idaho, would not be changed.

Removing the TMI debris will require 35 to 40 trips over several years between the Londonderry Twp. plant and the Idaho National Engineering Laboratory.

The federal agency and GPU Nuclear Corp., which operates TMI, said this month that the first shipments of fuel damaged in the March 1979 accident would be hauled to the research center this month.

GPU Nuclear spokesman Gordon Tomb said last night he could not say when shipments will be made from the plant, but added that none had been made yet.

"The psychological and physical health of the people of the city of Pittsburgh are threatened by the presence of these radioactive fuel fragments and debris in and around Pittsburgh," said the resolution adopted Monday.

Federal officials, in announcing the planned shipments, expressed confidence in the safety of the plan.

Officials say less than 4 millirems an hour of radioactivity will be detectable six feet away from the cask. The Nuclear Regulatory Commission requires radioactivity readings not exceed 20 millirems an hour at a distance of six feet.

The Patriot, Harrisburg, Pa., Thursday, July 31, 1986

U.S. rebuffs Heinz on train rerouting bid

By David Stellfox
Patriot-News

U.S. Sen. John Heinz, R-Pa., has asked the federal Department of Energy to consider rerouting shipments of Three Mile Island radioactive waste through less populated areas of the state.

In a letter to DOE Secretary John S. Herrington yesterday, Heinz also requested the agency give local officials notice of such shipments.

Terry Smith, a spokesman for DOE, said the route was chosen in accordance with agency safety guidelines and will not be changed. Smith added the shipments pose "very, very minimal risk" to public health and safety.

The first of an estimated 40 shipments of TMI's Unit 2 reactor core debris left the Londonderry Twp. facility before July 22. The rail freight was to pass through 10 states on its way to the Idaho National Engineering Laboratory.

DOE officials before the shipping program began said they would not announce publicly exact dates and times of the shipments, although an emergency preparedness official in each state was to be notified.

Some local officials along the route, including a Pittsburgh councilman, were upset because they weren't notified of the shipment. Councilman Mark Pollock has said he objects to the train passing through Pittsburgh at all.

Nebraska Gov. Bob Kerrey last week ordered the Nebraska State Patrol to stop the train before it crossed the border from Kansas into his state. The train was held up for 3½ hours because Kerrey said state officials had never been notified of the shipment.

"We're getting reports all the way out to Idaho that people were not notified," an aide to Heinz said in a phone interview last night.

"In some cases, this [train] passed through towns and people found out about it the next day," the aide said.

Heinz wrote Herrington that he was "dismayed" that the department has chosen to route the shipments on a rail line that goes through several densely populated areas of Pennsylvania, including the cities of Pittsburgh, John-



Sen. John Heinz

"Dismayed" at route town, Harrisburg and Altoona."

Heinz said he was acting out of his own concern, not from pressure from officials of his hometown of Pittsburgh.

The route through central Pennsylvania as announced by DOE called for trains to travel south from the Londonderry Twp. plant to a bridge over the Susquehanna River near Marietta, then north to the Enola freight yards for transfer to a westbound freight train.

Smith said the route was chosen because it "utilizes the highest quality track available and minimizes transit time."

State emergency preparedness officials will continue to be notified of shipments, Smith said, and they in turn may notify their local counterparts.

The debris from Unit 2's core reactor is not the first interstate shipment of radioactive waste. The debris is said to be less radioactive than spent fuel rods from normal nuclear plants.

The debris is carried on a flatbed railroad car in specially designed lead and stainless steel casks.

Radioactivity six feet from the casks is 8 millirems while the federal limit at that distance is 10 millirems.

United Press International accounts are included in this story.

By David Stellfox
Patriot-News

Opposition to the shipping of radioactive debris from Three Mile Island has waned after federal officials' steadfast refusal to reconsider alternative routes.

U.S. Department of Energy officials expect to ship at least one more load of radioactive debris from the damaged Unit 2 reactor to Idaho by rail before the end of the year.

Terry Smith, spokesman for the Department of Energy and shipping contractor EG&G Idaho, said only one more shipment may be made this year because of the time involved in returning to TMI the casks used to hold the waste and the time it takes to refill them with debris.

Smith responded to criticism after the first shipment this summer by immediately ruling out any changes either in the shipping route or the notification procedure.

U.S. Sen. John Heinz, R-Pa., is still waiting for a formal response from Energy Secretary John S. Herrington to his letter that asked the federal agency to reroute train shipments away from major cities, including Pittsburgh, John-

town, Altoona and Harrisburg.

A spokesman for Heinz said the senator received an acknowledgment letter from the Department of Energy, but has not received the promised formal response. The spokesman said a period of several months for the response to arrive would not be unusual.

Heinz sent his letter to the Energy Department on July 30, after Pittsburgh City Council adopted a resolution urging federal officials to consider a different route.

Council members complained they were not notified that the shipment would be passing through their jurisdiction, and Heinz asked the Energy Department for better notification of local officials.

The procedure — in which the Energy Department notifies the Pennsylvania Emergency Management Agency, which notifies county emergency management directors affected — was followed properly on the first shipment, state and federal officials said.

PEMA spokesman John Comey said the counties are given a 12-hour time period during which the train could be in their county. They are told the information is "secured" and not for public dissemination.

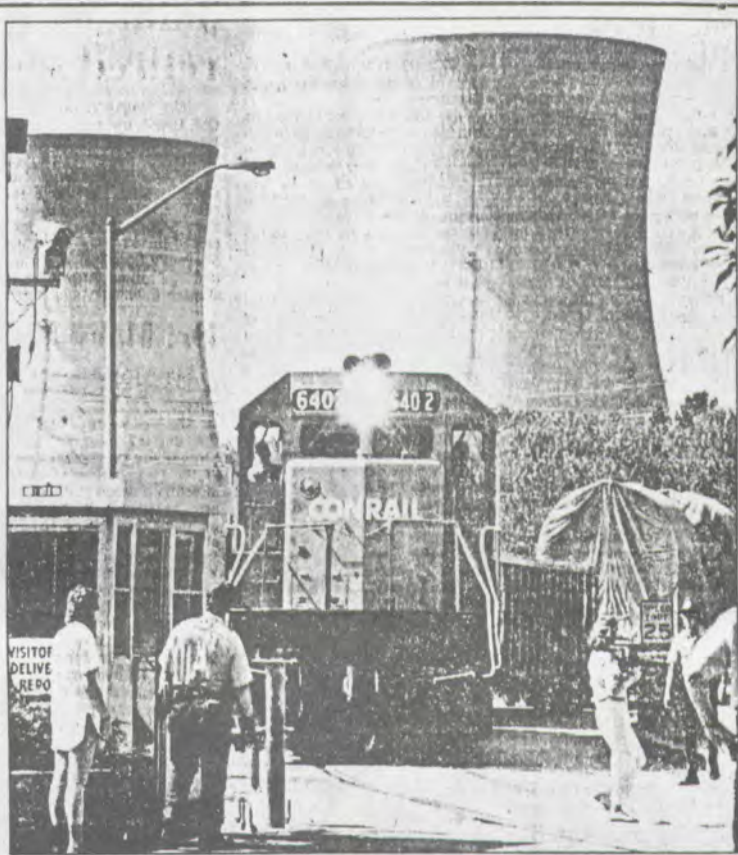
From the county emergency-management director, the information goes to various officials, depending on the county. Some keep the information under wraps, while others alert fire companies, ambulance crews, county sheriffs and commissioners.

Allegheny County Emergency Management Director Robert Kroner said he notifies the Pittsburgh public safety director that a shipment is coming through.

The first shipment went through on a Friday, and Pittsburgh Councilman Mark Pollock said the public-safety director may have been notified at home in the evening, but council members were not.

Pollock said council has no plans to follow up their resolution with any other action. "We pretty much left it there. We're pretty much powerless to do anything about it," he said.

Nebraska Gov. Bob Kerrey succeeded in stopping the first shipment in Kansas, before it crossed the border into his state, because he said his office was not notified. The second shipment went through Nebraska without a hitch.



Train carrying second shipment of radioactive debris leaves Three Mile Island Sunday

Criticism of TMI debris shipment wanes

The Patriot, Harrisburg, Pa., Thursday, October 8, 1986

TMI cleanup completion date set back

By David Stellfox
Patriot-News

GPU Nuclear Corp. has pushed back the date for finishing cleanup of Three Mile Island Unit 2 by about three months.

Officials now expect to complete the reactor cleanup work by next summer, with the entire cleanup program ending in 1988.

GPU Nuclear officials briefed the Advisory Board for the Decontamination of Three Mile Island Unit 2 at a meeting last night in Holiday Inn Center City.

Frank Standerfer, vice president and director of TMI Unit 2, said about 56,000 pounds of reactor core debris have been removed from Unit 2 to date.

That equates to about 19 percent of the total 290,000 pounds of debris to be loaded into canisters for removal to the Idaho National Engineering Laboratory, he said. The TMI-2 core was damaged in the March 1979 accident.

The new schedule takes into account the results of core examinations completed in July, and efforts by GPU Nuclear to purge the water of microorganisms that had clouded the reactor water and hampered work.

William D. Travers, NRC deputy program director for Unit 2, told the advisory panel that any delay in the cleanup is unfortunate, "but has that slip or change

in the schedule resulted from some lack of diligence on the part of GPU? I don't think so," he said.

The next stage in the cleanup will come when a drilling machine, used last summer to take samples of the hardened portion of the core, is used to break up the hardened mass to ease its removal.

Financially, the near \$1 billion cleanup is on schedule, Standerfer told the panel.

Of the total estimated \$965 million for cleanup, \$694 million has been spent and \$271 million remains.

The money is coming in as planned and no problems are anticipated, Standerfer said.

The advisory panel also discussed civil penalties the U.S. Nuclear Regulatory Commission recommended against GPU Nuclear. Standerfer said the company is paying a \$40,000 fine for not notifying the NRC in 1984 of an adjustment to a polar crane used in the cleanup.

Standerfer said GPU disagrees with some of the NRC's complaints in that citation, but will pay the fine and send a letter accompanying it, detailing the company's differences.

Travers told the panel no hearing had been set yet on GPU's appeal of a \$64,000 fine in August 1985 for its alleged harassment of former cleanup senior engineer Richard D. Parks.

The Patriot, Harrisburg, Pa., Wednesday, Sept. 10, 1986

TMI microbes cause big woes

By Frank Lynch
Patriot-News

They're back.

Tiny organisms, which had so clouded Three Mile Island Unit 2's reactor water that cleanup was halted for a month, are again slowing work at the crippled reactor.

"Viability is a matter of a few inches. That's what we're talking about, inches. We'd like to be measuring in feet," plant spokesman Gordon Tomb said yesterday.

The creatures, one-celled plant and animal organisms, feed off carbon-based hydraulic fluids left by machinery used to remove the 15 tons of rubble from the reactor vessel. They also thrive on the tepid reactor water and underwater lights used in cleanup.

Plant operator GPU Nuclear Corp. has assembled an advisory group of chemists and water quality experts to give guidance, Tomb said. In addition, he said, a team of plant engineers has been assigned to work full time on treating the water.

The creature-caused water hampers the ability of cleanup workers to see what they are doing. Standing on a platform 12 feet above the water-covered rubble, they must use remote television cameras and long-handled tools to scoop debris into defueling canisters.

"I think it's fair to say that we're not loading as quickly as we think we would be if the viability was better," Tomb said.

In May, GPU Nuclear had announced that common hydrogen peroxide, a high-pressure pump and a swimming pool filter were used to control the organisms. Cleanup was halted for four weeks while most of the creatures were killed, then filtered from the water.

The company has also tried to keep the growths in the water under control by adding chemicals, in which dirty water is replaced with an equal amount of clean water.

But the creatures have made a comeback, Tomb said, mostly because the materials clog the filters, slowing the rate that they can be removed from the reactor vessel. Even using hydrogen peroxide and filters, the water "doesn't stay clean for very long," he said.

The advisory group and the TMI engineers are focusing attention on using filter systems that won't clog so easily. They also are considering adding a coagulant to the water to "bring the fine materials together and make them more readily filterable," Tomb said.

Tomb said the company wants the filters to remove the organic and inorganic materials on a continuing basis.

The Patriot, Harrisburg, Pa., Tuesday, October 21, 1986

Nuclear engineers to lecture in schools

Nuclear engineers from Westinghouse Electric Corporation will be in the Harrisburg intermediate schools today to encourage students to enter high technology fields.

LaDoris Guess and Garry Harris, part of the Westinghouse Minority Spokespersons and Community Ambassadors Program, will advise students about the different career twists and turns available to engineers and how to plan their curricula to be ready for college.

They will speak to eighth-graders at James Rowland and John Scott Intermediate schools today during scheduled assemblies at 10 and 11 a.m. and 1:30 and 2:30 p.m.

Comments fuel speculation on restart of TMI-2

By David Stellfox
Sunday Patriot-News

Recent comments by a GPU Nuclear Corp. official have fed speculation that the utility would like to restart Unit 2 at the crippled Three Mile Island Unit 2 nuclear reactor.

While many dismiss the prospects of a rejuvenated Unit 2 providing nuclear power, one public official is convinced GPU has no intention of decommissioning the plant.

The company policy — that the future of the plant remains

wide open — has failed to end the speculation.

Joel Roth, a Lancaster resident and member of the Advisory Panel for the Decontamination of TMI Unit 2, thinks the comments of a GPU official two weeks ago at an advisory panel meeting were a significant departure from the company's traditional stance.

At the meeting, Frank Standerfer, vice president and director of TMI-2, told Roth a decision to reactivate the plant was contingent on an analysis of the plant after cleanup is complete.

He said the company is able to

buy power from other utilities for at least the next 10 years, so there's no pressure on the company to make a decision now.

"That's the first time in my memory that anyone from the utility has even hinted about (re-start) as a possibility," Roth said.

"It's very obvious to me, that plant is not going to be permanently decommissioned," Roth said.

Company spokesman Douglas Bedell said last week the company's position has not changed. He said the cleanup effort under way at the plant now "is not a decommissioning process."

However, he added, the company has never spent any cleanup money for the purpose of preserving the option of starting up the plant.

"We've not been spending any additional money aimed at those things that would restore the plant," Bedell said.

"It has not been decided that it will be decommissioned, and it has never been decided that it will be restored," he said.

A decision to reactivate the plant would depend on the technical feasibility and the demand for and costs of energy, Bedell said.

Bedell said that probably late next month, the company will be talking more "about the condition of the plant in the period after cleanup is completed in 1988."

Unit 2 was crippled in the March 1979 accident at TMI in Londonderry Twp. Its twin reactor, Unit 1, was not damaged in the accident and was restarted a year ago.

The advisory panel had asked GPU to discuss the post-cleanup status of Unit 2 at its meeting on Oct. 8. GPU refused, saying it wasn't ready to make a public presentation on Interim Monitored

Storage. IMS is the term that has recently come into use to refer to the post-cleanup status of TMI-2.

Bedell would say only that IMS is "a condition in which the plant would be in a safe, stable condition with the fuel removed, those kinds of things."

Even though GPU won't end the speculation, many people, including other advisory panel members and state and federal officials, say reactivation of Unit 2 is not likely.

The Patriot, Harrisburg, Pa., Saturday, July 26, 1986

Court to air GPU drug tests

By Wendt Taylor
Patriot-News

A union representing about 650 employees at GPU Nuclear Corp.'s Three Mile Island power plant asked a federal judge in Philadelphia yesterday to halt plans for drug and alcohol testing until the issue has gone to arbitration.

A petition was filed by the International Brotherhood of Electrical Workers, Local System Council U-9 and Local 563, after GPU announced plans to begin random testing of employees and contractor employees at all of its facilities, including TMI in Londonderry Twp. and at Oyster Creek in Forked River, N.J.

U.S. District Judge Daniel Huyett will hear arguments Aug. 6.

Joseph Kivler, president of Local 563, said, "There may be a need for drug and alcohol programs, but we object to implementation without having any involvement in the decision."

While Kivler's local had filed a grievance with Metropolitan Edison, a subsidiary of GPU Nuclear, about the drug testing program, the arbitration hearing is not scheduled until Sept. 11. GPU officials said Thursday they planned to begin testing of the company's 3,200 employees and contractor employees about Sept. 1.

Kivler said the petition was filed because "the rank and file is very concerned about this."

GPU spokesman Gordon Tomb said the random testing policy was added to the existing "fitness for duty" program because of a concern for safety.

"We don't mean to make life tough for our employees," he said. "We value our employees."

TMI was the scene of the nation's worst commercial nuclear power accident in 1979.

Since 1982, GPU has issued regulations prohibiting the use and possession of drugs and alcohol at work. Drug testing was used when there was reasonable suspicion of a drug or alcohol problem. With this additional step, testing will be

done on a random basis. Each month, 20 people at each site will be selected by computer for urine tests.

Those who refuse tests will be sent home from work and could face dismissal.

The petition said, "Implementation of the policy will allow the company for any reason, or for no reason, unrestricted license to search every employee's property and person and to seize employees' bodily fluids."

Barry Steinhardt, executive director of the American Civil Liberties Union of Pennsylvania, said drug testing programs "violate two fundamental American notions" — that a person is innocent until he is proven guilty, and a person should not be searched without good cause.

In addition, Steinhardt said, two of the most popular screening tests have inaccuracy rates of up to 40 percent.

"That false rate goes both ways," he said. "That means false positives and negatives."

"Business has been sold a bill of goods on drug testing when they may be no more helpful than common sense," Steinhardt said.

Tomb said the urine will be divided into two samples. If a test of the first shows a positive result, the other half will be tested, he said. If both samples are positive, disciplinary action will be taken. A committee will review the facts and recommend rehabilitation or dismissal, he said.

Meanwhile, GPU Nuclear officials said yesterday that the process of drilling into TMI's crippled Unit 2 reactor core is expected to be completed this weekend.

The drill has been used during the past three weeks to retrieve samples of debris from the core damaged in the 1979 accident.

Although the sampling is being completed, the drill will be used to bore additional holes in debris in the reactor during the next several days to make the rubble easier to remove, GPU said in a prepared statement.

The Patriot, Harrisburg, Pa., Friday, October 10, 1986

TMI worker urine tests ruled out by arbitrator

Three Mile Island workers will not be subject to random testing for drug and alcohol use.

An arbitrator has ruled that random urine tests proposed by GPU Nuclear Corp. are not permitted under the company's contract with the International Brotherhood of Electrical Workers, GPU spokesman Gordon Tomb said last night.

Arbitrator Jonas Aarons also ruled out proposed drug and alcohol testing as part of annual company physical examinations.

"This is a major victory for us," said Joseph Kivler, president of IBEW Local 563. He said he will make a formal statement today after reviewing the written ruling.

GPU's practice since 1982 of conducting urine tests "on the basis of reasonable grounds" may continue. "Reasonable grounds" was not defined by the arbitrator,

but would be decided on a case-by-case basis, Tomb said.

Tomb called the ruling disappointing, but said the company "will continue to look for ways to further ensure a drug-free environment for the protection of our workers and the public."

U.S. District Judge Daniel Huyett III had issued an injunction Aug. 8 halting GPU's plan to start random testing Sept. 1 until the arbitrator ruled on its legality.

GPU wanted urine tests every month on 20 employees picked randomly by computer at each of its facilities, including TMI nuclear power plant in Londonderry Twp.

The petitioners for the injunction had said random testing would allow "for any reason, or for no reason, unrestricted license to search every employee's property and person and to seize employees' bodily fluids."

The Patriot, Harrisburg, Pa., Thursday, August 14, 1986

Alliance lambastes GPU 'plot'

Water plans hit on health effects

By David Stellfox
Patriot-News

Alternatives on disposing of radioactive water from Three Mile Island's damaged Unit 2 have raised concerns among citizens about the effects of exposure to radioactive tritium.

A spokeswoman for the Susquehanna Valley Alliance, a Lancaster-based anti-nuclear group, lambasted GPU Nuclear officials last night for "continuing arrogance" in playing down health effects of radioactive releases.

Frances Skolnick, spokeswoman for the alliance, cited an advertisement by GPU which ran Aug. 1 in the Patriot-News as an example of a "typical plot by GPU" to underestimate ill effects of radiation.

Skolnick's comments came at a meeting of the Advisory Panel for the Decontamination of TMI Unit 2 in Lancaster City Council chambers last night.

The advertisement said the three options being looked at for disposing of the contaminated water are all environmentally safe by meeting all federal and state standards.

"To say that any of these three isotopes [strontium 90, cesium 137 and tritium] is environmentally safe and to advertise these methods as such is morally wrong and a typical plot mastered by GPU to underestimate the hazardous effects of exposure to low levels of radiation," Skolnick said.

Members of the advisory panel, however, were more concerned about the necessary approvals GPU Nuclear will need for whichever of three disposal options it ultimately chooses and how long such bureaucratic red tape will take.

GPU's three options are: 1) evaporating the 2.1 million gallons of radioactive water and disposing of the radioactive residue in a low-level radioactive waste dump off-site; 2) solidifying the water by mixing it with concrete and burying it in an on-site industrial landfill or 3) diluting it and discharging it into the Susquehanna River.

Frank Standerfer, vice president and director of TMI 2, said GPU is "committed" to the evaporation process, but would need special approval, which some panel members felt might not come easily, from the federal Department of Energy to dispose of the residue.

The solidification method also would require special approvals, from the state and Dauphin County, which Standerfer said could lead to a "protracted" process. The third and cheapest option, dumping the water in the river, is being avoided because of "long-standing public concern with disposal of water to the river," Standerfer said.

Standerfer said most of the strontium 90 and cesium 137 can be withdrawn from the Unit 2 water through ion exchange, but that the tritium cannot be removed because it attaches itself to the water molecule.

The evaporation method would release 1,020 curies of tritium to the atmosphere over a 2½-year period, which Standerfer said was the equivalent to one hour worth of natural background radiation received in the Harrisburg area.

"That's 200 times less than occurred from the krypton venting over a two-year period," he said.

Skolnick, in her remarks, said little is known about the health effects of tritium, which wasn't discovered to be a fission product until 1959.

"The disposal of radioactive water at TMI cannot be seen in total isolation from the rest of the world," Skolnick said.

She said the releases of radiation associated with all three options "is in addition to the 24 million curies released at the time of the accident, the 43,000 curies from the venting of krypton, 13 months later, the tritium and other radionuclide releases during normal operations of Unit 1, the releases from cleanup... and the radioactive contamination delivered to us from the errors and incompetencies of nuclear power plants and weapons facilities throughout the world."

William D. Travers, the Nuclear Regulatory Commission's on-site inspector at TMI, said an environmental impact study will be performed by the NRC staff before NRC commissioners grant approval to GPU's evaporation option next year.

In other business at the meeting, Standerfer told the panel that recent borings done at the Londonderry Twp. nuclear power plant's Unit 2 showed the area of the reactor vessel below a hardened surface at the bottom of the core is relatively free of debris.

The Patriot, Harrisburg, Pa., Thursday, October 9, 1986

TMI violations cited by NRC

The operator of the Three Mile Island nuclear power plant has been cited by the Nuclear Regulatory Commission for failing to implement procedures and assess the safety of changes at Unit 1.

The violations, identified during a Performance Appraisal Team's inspections in March and July by NRC Region 1 inspectors, point to a failure of GPU Nuclear Corp. to strictly implement administrative procedures concerning operational changes that have been made at the plant.

The violations, "each with multiple examples," deal with the

conduct of safety evaluations, proper implementation of design control requirements, proper implementation of modification control instructions and prompt corrective action on known conditions adverse to quality, the NRC says.

The NRC assigned all of the violations a Severity Level IV, with I being the most severe and V being the least severe. There is no fine involved.

The notices of violation are contained in a review by NRC officials of the PAT's findings. The report doesn't deal with the PAT's "substantial" positive observations about plant performance, William F. Kane, director of Region 1's division of reactor projects, writes in the report.

The Patriot, Harrisburg, Pa., Wednesday, October 1, 1986

Operator of TMI penalized GPU Nuclear fined \$40,000

From staff and wire reports

WASHINGTON — GPU Nuclear Corp. has been fined \$40,000 for violating government rules during cleanup of the crippled Three Mile Island Unit 2 reactor in Pennsylvania.

The Nuclear Regulatory Commission yesterday fined the TMI operator for installing a brake-release mechanism without proper engineering review and documentation on the polar crane used in cleanup.

The error was categorized as third-level in severity. The NRC issues violations in five levels.

It was the second violation the NRC has levied against GPU Nuclear for the work of the polar crane at the Londonderry Twp. nuclear plant. The first violation, which did not result in a fine, was issued in February 1984.

In a letter to GPU Nuclear, James M. Taylor, director of the NRC's Office of Inspection and Enforcement, said the violation "appears to be another, more serious example of previous failures to fully implement NRC technical specifications governing the cleanup."

The citation comes four years after the mechanism was installed, more than two years after GPU Nuclear reported it and more than a year after the NRC Office of investigations probed the matter.

Gordon Tomb, a spokesman for GPU Nuclear, said the mechanism was installed while two engineering groups at TMI were being merged into one for unified control of cleanup work.

"The crane refurbishment team did not recognize the brake release was a modification that required an engineering review," Tomb said.

He said the fine would be paid by stockholders in GPU Nuclear and its related companies.

The polar crane became inoperable in July 1984 during the critical lifting of the 160-ton head of the Unit 2 reactor, damaged in the March 1979 accident.

The Patriot, Harrisburg, Pa., Thursday, July 24, 1985

Copter pilot's suit blames TMI radiation for cancer

A helicopter pilot hired by CBS to fly reporters over the Three Mile Island nuclear power plant after the 1979 accident has filed the latest personal injury claim against TMI's owners.

James L. Webb of Leonard, Md., is joined in the suit by his wife, Patricia.

They claim that he was ex-

posed to radiation during a three-day period after the March 28 accident while he was working as an independent contractor for Helicopter & Aircraft Service Co. Inc.

Last year, the suit says, he was diagnosed as having cancer of the colon.

About 2,000 plaintiffs have filed suit in Dauphin County Court

since February 1985. They claim the accident at the Londonderry Twp. plant caused emotional distress and exposed the plaintiffs or their relatives to radiation that increased their risk of cancer and other illnesses.

Twelve test cases are expected to be heard by a jury next spring. Defendants in the suits are

General Public Utilities Co., owner of the plant; its subsidiaries, Metropolitan Edison Co., Jersey Central Power & Light Co. and Pennsylvania Electric Co.; plant designer Babcock and Wilcox Co. and its parent company, J. Ray McDermott & Co.; engineer Burns & Roe Inc.; and Catalytic Inc., a subcontractor at TMI.

Variety of events has accompanied TMI Unit 1 restart

Three Mile Island Unit 1 was restarted Oct. 3, 1985, after the U.S. Supreme Court refused to hear an appeal of a lower court ruling to bar restart.

After a December shutdown following the three-month, Nuclear Regulatory Commission-mandated phased-in restart, Unit 1 was taken to 100 percent power Jan. 6.

The following chronology of events is gleaned from reports filed by the operator of the Londonderry Twp. power plant, GPU Nuclear, and/or the NRC.

— Oct. 3, Unit 1 restarts after U.S. Supreme Court refuses to hear arguments on the 3rd U.S. Circuit Court's decision to allow restart.

— Oct. 3, during approach to criticality, NRC inspectors discover dismantled scaffolding and electrical cords lying next to a pump, constituting a trip hazard.

— Oct. 5, 30-foot-high scaffolding in diesel-generating room discovered to be unrestrained and on unlocked roller wheels. NRC later cites GPU Nuclear for violation.

— Oct. 13-18, Unit 1 turbine taken off line several times, with reactor at low power, to repair failed welds on drain lines from steam inlet piping to the main turbine. System put back on line — at 48 percent power — Oct. 23.

— Oct. 28, leak of 150 gallons of primary [radioactive] water in makeup pump room. Small quantity of radioactive gases released to the environment.

— Nov. 2, unexpected steam leak during valve repair, lasts 20 minutes. Two employees receive superficial skin burns from "relatively hot" water.

— Nov. 19, Unit 1's power unexpectedly surges — from 48 percent to 53 percent — when a technician's belt buckle catches a control room panel toggle switch. Power returned to 48 percent a minute later.

— Nov. 22-29, deposits — "crud," according to one NRC report — found in steam generators, risking that the plant won't be able to reach 100 percent power.

— Dec. 17, seven TMI workers and an NRC inspector slightly contaminated when radioactive gas is released into auxiliary building during the replacement of waste gas compressor filter.

— Dec. 27, NRC allows utility to take reactor to full power. Maximum power, however, isn't achieved because of fouling in secondary side of steam generators. Unit 1 reaches 88 percent power.

— Dec. 30, nine workers slightly contaminated during "unusual event" when seal from a makeup pump breaks and leaks. Filtered radiation released to environment.

— Jan. 4, 1986, malfunction in secondary plant that caused a high level in a moisture separator results in a turbine-to-reactor trip. When reactor is restarted, it reaches 100 percent power because sediment in the generators apparently had repositioned, allowing a more efficient flow of water and steam.

— Jan. 16, GPU Nuclear said Unit 1 would be shut down to repair leak in a steam line in the secondary, non-nuclear system. Instead, company monitors leak for two weeks then shuts down for repairs Jan. 27, when pressure drop in device monitoring steam line is detected.

— Jan. 24, portion of the plant's integrated control system, which controls and coordinates major systems, loses power while technicians repair equipment. Plant is controlled manually for 90 minutes. Notification of incident to NRC is made "as a courtesy."

— Jan. 27, NRC reports a "forced outage" to repair a leaking expansion bellows on a feed heater extraction line.

— Jan. 29, during a reactor coolant system cooldown, a relief valve in the decay heat removal system activates, spilling water on the auxiliary building floor and into the floor drain system.

— Feb. 2, licensee completes repairs to bellows and plant is started up. Returned to full power Feb. 6.

— Feb. 6, NRC reports GPU Nuclear fire-brigade personnel responded to a fire drill without required respiratory protection apparatus. NRC issues a notice of violation, a fourth-level violation in severity.

— March 15, plant shut down after malfunction is detected in a valve in the lubricating oil system of the plant's turbine-generator. Plant is restarted later in the day.

— March 21, operators begin planned shutdown to begin electronic testing of heat-exchange tubes in the two steam generators.

— March 22, "unusual event" is declared when in-plant monitor sounds as workers are "degassing" the Unit 1 system. A relief valve opened, causing a release of radioactive noble gases, primarily xenon-133. No workers are contaminated; GPU reports small, filtered release to the atmosphere.

— March 24, radioactive gases concentrate in Unit 1 containment building. A cover is removed from the steam generator allowing radioactive noble gases to build inside containment building. All but essential entries into the building are suspended for 12 hours. GPU says 120 workers are tested; five are found to suffer external contamination. "Very small" but detectable levels of radioactive iodine are found in 60 workers. Readings on the other 60 were "too small to be detected."

— March 24, in unrelated incident, five Unit 1 workers suffer slight skin contamination.

— About April 12, cracks are found on several nozzles that direct emergency feedwater into the two steam generators. They are repaired later during an outage.

— April 18, NRC amends TMI-1 license, without hearing arguments, to allow for cracks or pits in steam generators less than 50 percent through the walls, which are .03-inch thick. After-the-fact

hearings on that amendment — as well as a pending amendment that would allow cracks to be as deep as 70 percent of the tube walls — are pending before NRC panel.

— April 18, company announces 25 of the 2,700 steam generator tubes sampled need to be taken out of service.

— April 21, during start-up preparations series of breaker trips causes reactor coolant pumps to trip, triggering reactor trip. Nuclear reaction had not yet begun.

— April 23, Unit 1 restarts about two weeks ahead of schedule, but shuts down automatically within an hour because operators did not transfer pump power quickly enough for the production of steam in the generators. No emergency declared, no damage to plant. Unit restarted later in day.

— April 23, main turbine generator is placed on the regional electric grid. The "generator exciter bearing vibration monitors" detect high mechanical vibration on two journal bearings. Power stopped at 56 percent. Workers find wrong-size gasket installed in the turbine.

— April 24, plant shuts down again at 11 a.m., because of break found in a secondary drain line. The line is one of four designed to draw moisture from steam and "dry" it before it goes to the tur-

bines to generate electricity. Turbines are shut down, but the reactor continues to run at low power, less than 5 percent.

— April 25, Unit 1 is restarted, reaching 100 percent power the next day.

— June 2, Unit 1 shuts down at 2:11 p.m. No emergency. Operators replacing a faulty breaker try switching power to a second breaker, causing turbine to shut down, resulting in reactor trip. Plant restarted about 12:30 a.m. June 3.

— June 6, NRC issues inspection report including two violation notices. Utility cited for improperly monitoring in-plant radiation levels — resulting in reactor building iodine concentrations going undetected for up to 14 hours and unplanned exposures to personnel — and failure to properly post a radiation area.

— June 11-12, power cut to drop temperature of the main transformer, overheated by transformer oil cooling system problem. Other power cuts on June 7-8 and 13 result from problems with extraction steam valves which provide steam for feedwater heating.

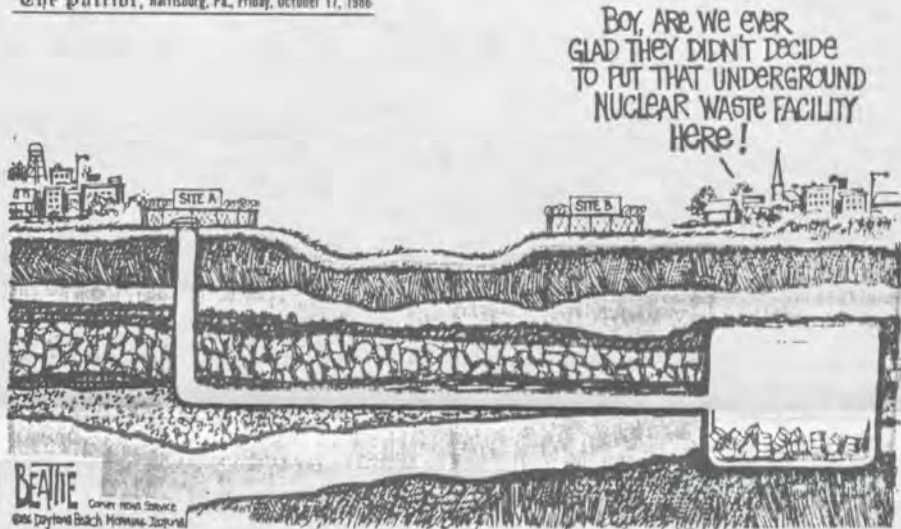
— July 18, utility reports leaky seal trips pumps designed to maintain water level in Unit 1 fire protection system. Valve on one pump remains open, allowing water to flow back through it. Fire protection system remains operable.

— July 18, NRC report on same incident says fire suppression deluge system "actuated," causing pressure drop in the station's fire-main pressure, causing other fire pumps to start, including diesel-driven fire pump. Due to apparent equipment malfunction, the diesel-driven pump was overpressurized, causing a cover to be blown off and through the roof of the pump building. Plant can continue operating with three more fire pumps available.

— July 28, during replacement of filter assembly in the makeup purification system, highly radioactive filter is inadvertently dropped. The filter, being moved with a long-handled tool to minimize personnel radiation exposure, slipped off the tool and fell to the floor. The filter was recovered using the tool and placed in a transfer casket the same day.

— Sept. 19, NRC reports increased radioactivity in the reactor building. A valve leaking through the seal leak-off line discharges into the building sump. By the end of the week the "seal leakoff" is capped, but a union in the line is found to have leaks. GPU Nuclear and NRC are monitoring reactor building activity.

The Patriot, Harrisburg, Pa., Friday, October 17, 1986



The Patriot, Harrisburg, Pa., Thursday, October 30, 1986

After 1-year run, TMI to be shut down for refueling

By Frank Lynch
Patriot-News

Three Mile Island officials, pleased with the performance of the Unit 1 reactor in its first year of operation since 1979, say they will close the nuclear plant tomorrow for refueling.

Since yesterday the Londonderry Twp. plant's power has been slowly decreased from 100 percent power. At 8 p.m. tomorrow, when Unit 1 is at 95 percent power, it will be shut down for the five-month outage.

While the plant is down, 76 of the reactor's 177 fuel assemblies will be removed and replaced with new ones. Maintenance, repairs and testing of plant equipment also is planned.

Henry D. Hukill, vice president of TMI operating company GPU Nuclear Corp. and the director of Unit 1, yesterday said plant performance has been "outstanding" since it was restarted in October 1985.

At a news conference in which defueling plans were outlined, Hukill said, "I am extremely hap-

py to report to you that TMI-1 has had an excellent, outstanding year of operation."

The U.S. Nuclear Regulatory Commission ordered that Unit 1 remain shut down the summer of 1979, pending analysis of the March 28, 1979, accident at Unit 2. Unit 1 was down for scheduled refueling at the time of the accident.

Hearings and court challenges to restart were effectively ended by the U.S. Supreme Court when it gave a green light to restart Oct. 2, 1985.

Since January, Hukill said the

plant has run at its capacity 85 percent of the time.

Hukill said the reactor will be packed with enough fuel to allow the plant to run another 18 months, and the next refueling will be in 1988.

Among items to be given attention during the outage will be the tubes in the plant's two steam generators.

Ronald J. Toole, operations and maintenance director, said 3,000 of the 31,000 tubes will be tested for cracks and pits. Those with defects greater than 40 percent the

thickness of the tube wall will be taken out of service.

In addition, three of the tubes — which have the circumference of a pencil and walls .034 inch thick — will be pulled from one steam generator for detailed analysis.

During an April outage, the NRC granted GPU Nuclear a one-time variance that allowed tubes with defects up to 50 percent the thickness of the wall to remain in service. The variance was granted while the NRC decided whether to allow a permanent change to 50

percent.

Skip Young, NRC resident inspector at TMI, said the decision on any change will be based, in part, on the condition of the three tubes that are pulled. "It really depends on what comes back from the [laboratory]," he said.

Toole said he expected a decision on the variance to be made during the outage.

Also during the outage, the plant's fire protection system will be enhanced and the turbine will be overhauled and inspected.

GPU's deal for Rickover's TMI report may be probed

By Frank Lynch
Patriot-News

Acting U.S. Attorney James West said his office may probe an arrangement in which General Public Utilities Corp. paid \$380,000 for a report rating the company's ability to operate Three Mile Island Unit 1.

West said yesterday that he hadn't had a chance to review a request by the anti-nuclear group Three Mile Island Alert that the relationship between GPU and the late Adm. Hyman G. Rickover be investigated.

"Once I've had a chance to review it there will be a decision made whether it merits anything further," West said.

Rickover's report, released in November 1983, generally praised plant operator GPU Nuclear as fit

to run the plant. Rickover's assessment was weighed by the Nuclear Regulatory Commission in its May 1985 decision allowing TMI-1 to restart.

Rickover's son, Robert, said in published reports last week that his father was approaching senility when asked to draft the evaluation, and that the late admiral actually thought the survival of the world depended on nuclear power plants being scrapped.

"We are delighted that he's considering it," said TMI Alert Chairperson Vera Stuchinski, who asked for the probe. "We think there's enough here for him to seriously consider it."

In requesting the investigation, Stuchinski said GPU's failure to disclose the payment of \$380,000 to a foundation Rickover founded

constitutes "a material omission of fact," violating the Atomic Energy Act and the federal criminal code.

TMI Alert also alleges that GPU submitted the report to the NRC for consideration "knowing it was fraudulent, in that GPU understood that Rickover's report would support restart before the investigation was conducted."

GPU spokesman Gary D. Plummer said there was nothing improper about the consulting arrangement with Rickover.

"We can only say what we have said before, and that which has been exhaustively examined by the media since the admiral's death," Plummer said. "We did make payments to the fund, but there is absolutely no truth to the assertion by some that we bought a favorable report on TMI. We had no idea what the admiral would

say about TMI."

GPU Chairman William G. Kuhns in September 1983 asked Rickover to assess the company's ability to manage the plant. Kuhns said last week that Rickover agreed to do the study, asking that in lieu of payment GPU make contributions to the Hyman G. Rickover Foundation in Leesburg, Va.

GPU paid the foundation monthly installments of \$25,000 for a year, Plummer said. Payments of \$5,000 were made intermittently between October 1984 and last March, he said.

Kuhns said last week that GPU intended "nothing sinister" by not previously disclosing financial terms of the agreement with Rickover, adding that the company does not always report its consulting arrangements.

Rickover, who died July 8 at age 86, is known as "the father of the nuclear Navy" because he introduced nuclear submarines to the nation's defense forces. He was also known for his brusque, hard-hitting personality.

Kuhns said he gambled in asking Rickover to study TMI man-

agement while the company was vying for approval to restart Unit 1, undamaged in the March 28, 1979 accident.

After several court appeals of the NRC's decision, Unit 1 restarted last October. It is now running at full power.

Rickover's son said his father was suffering "rapidly developing clinical senility" when someone "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."

TMI-1

Concern shrouds reactor despite operating record

By Frank Lynch
Patriot-News

After a 6½ year struggle, the operator of Three Mile Island's Unit 1 has prevailed in its attempt to restart the reactor.

However, despite a clean operating record in which the plant has run at full power more often than not since January, there are still areas of concern.

Among them are the tubes in the reactor's twin steam generators, the vulnerability of TMI-type reactors to problems, and the use of drugs of employees.

TMI-1 was down for routine refueling and maintenance at the time of the world-famous accident at its twin reactor, TMI-2, on March 28, 1979. That summer the U.S. Nuclear Regulatory Commission ordered Unit 1 be kept idle until safety and management integrity issues were resolved.

Only after a long hearing process, involving dozens of proceedings with a cast of hundreds, did the NRC reverse its order in May 1985.

Court appeals led to the U.S. Supreme Court, where justices on Oct. 2, 1985 voted 8-1 not to continue a stay of restart ordered by a lower court. The vote cleared the way for an Oct. 3 restart.

On that day, Philip R. Clark, president of the plant operating company, GPU Nuclear Corp., told reporters the utility was committed to produce power "carefully, placing primary assurance on doing things safely."

At the end of last month, TMI-

1 reached the equivalent of 200 days of full-power operation. From restart through July 21, the plant kicked out about 4 million megawatt-hours of electricity and operated at 100 percent power for 145 calendar days.

TMI's capacity factor has been 77 percent, meaning that it generated 77 percent of the electricity it could have produced had it been running constantly at full power.

Despite the performance record TMI-1 has compiled, plant and federal officials — and some public interest groups — still have concerns. Some of them are listed below:

Steam generator tubes — In 1981, while Unit 1 was closed down after the accident at Unit 2, a "small quantity of sulfur" inadvertently made its way into the reactor's primary system. As a result, more than half the tubes in the system's two steam generators were damaged by a form of "corrosive attack."

Thus began an ongoing debate over whether the tubes would be safe with a working plant. The long, slender tubes carry super-hot, radioactive water through "secondary" water to make steam, which powers the turbines to make electricity.

GPU Nuclear determined that the tubes were cracked mostly in their upper few inches, where they are anchored in a two-foot-thick block of steel known as a tube sheet.

Tubes cracked below the tube sheets were plugged and taken out

of service. In all, 1,541 tubes had been plugged.

The remaining tubes were repaired in 1982 by a process known as kinetic expansion. Using that technique, explosive charges were inserted into the tops of the tubes and detonated to reseal the tubes against the tube sheets. The NRC in October 1984 ruled that the process made the tubes safe for restart.

In April, when the plant was down for inspection, GPU Nuclear sampled 2,700 of the 31,062 56-foot-long tubes in the two generators. Workers found 31 to have pits or cracks more than 40 percent the thickness of the tube walls, which are .034-inch thick.

But, on the company's request, the NRC allowed a one-time variance requiring GPU Nuclear to remove from service only those tubes with cracks 50 percent through the wall, if the defects were less than one-fifth the circumference of the walls.

The variance, which is good through the next plant outage, required the company to plug only 25 tubes.

NRC hearings on the one-time variance, as well as a GPU Nuclear request that defects be allowed to go through 70 percent of the tube walls with a reduction in the length of the crack, probably will be held early next year. The requirement changes are vigorously opposed by Three Mile Island Alert, a local citizens group that is a party to the hearings.

The steam generators caused another problem, at least for a

time, after restart.

Gritty deposits were detected on the secondary, or non-nuclear side of the interior of the generators. While the deposits didn't pose a safety threat, they reduced the water flow through the generators and limited efficiency.

At one point in December, the reactor could reach only 85 percent of capacity, and one company official cautioned that 92 percent could be the top output.

But after the plant was taken down in January, then restarted, it was able to achieve 100 percent capacity. Officials said pressure fluctuations during the stoppage and restart apparently "redistributed" the deposits.

The company says it is looking into ways to clean the deposits, and this may be done during the next refueling outage planned for November.

NRC review of TMI-type plants — Also of concern to the NRC as well as an independent group of scientists, is the alleged "poor" performance of reactors made by Babcock & Wilcox Co. TMI-1 has a B&W reactor.

"The NRC has recognized since the Three Mile Island accident in 1979 that Babcock & Wilcox plants are more sensitive in their response to operational events than other pressurized water reactors," said the NRC in a January announcement.

The announcement went on that even though numerous modifications had been made to eight B&W reactors since 1979, "the number and complexity of events has not decreased as expected."

The Union of Concerned Scientists, a public interest group and self-appointed watchdog of the nuclear industry, chimed in, "accidents that pose a significant safety risk to the public still occur regularly at B&W plants."

So the NRC, with representatives of the utilities that own B&W systems, in February put together a study group that is focusing on "just about every area of plant design," said an NRC spokesman.

Until the study is completed by

the end of this year, NRC and plant spokesmen have said the plants, including TMI-1, remain safe to operate.

In addition to TMI-1, B&W plants being scrutinized are: Arkansas Unit 1, near Russellville, Ark.; Crystal River Unit 3, near Red Level, Fla.; Davis-Besse, Toledo, Ohio; Oconee Units 1, 2 and 3, near Clemson, S.C.; and Rancho Seco, Sacramento, Calif.

Drug testing program — Use of drugs and alcohol by employees at nuclear power plants is a concern to the industry, and to the management of TMI.

In 1982, the NRC proposed a rule on "fitness for duty," requiring nuclear utilities to establish and implement written procedures for ensuring that personnel in a nuclear power plant are fit for duty — not under the influence.

But because the nuclear industry, under the leadership of the trade group Edison Electric Institute, began developing its own program, the NRC the same year postponed the effectiveness of that rule.

And the programs developed by the industry in the last three years were enough to convince the NRC, early this month, to withdraw the rule altogether and refrain from further rulemaking in this area for the next 18 months.

In effect, the withdrawal lets the industry police its own affairs regarding drugs on the job, but the NRC reserves the right to "exercise discretion in enforcement matters related to fitness for duty programs" for plant personnel.

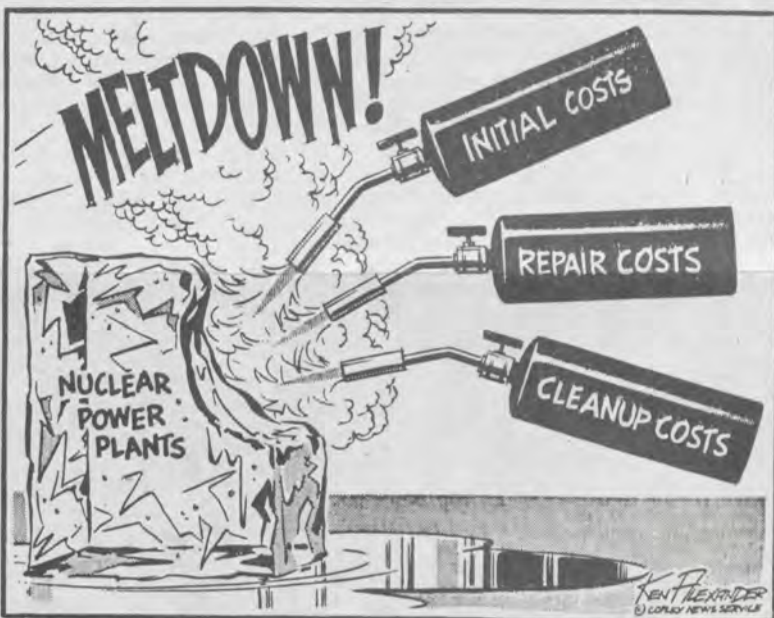
Last month, TMI officials announced that they, too, were implementing a "fitness for duty" program. All General Public Utilities employees, including the 1,300 at TMI and 700 others employed by contractors at the plant, would be subject to random tests to determine if workers are under the influence of drugs or alcohol.

Workers found to be under the influence may be reassigned while they undergo rehabilitation or could face disciplinary action, including dismissal.

The program began tomorrow Monday.

But TMI-worker unions — International Brotherhood of Electrical Workers, Local System Council U-9 and IBEW Local 563 — asked for and received a court injunction from a federal judge delaying implementation of the program pending an arbitration hearing on the matter.

A TMI spokeswoman said the program wouldn't be put in place until the arbitrator rules on the matter, perhaps sometime next month or October.



TMI-2

Last 12 months the most dramatic

By Frank Lynch
Patriot-News

Cleanup has been a priority at Three Mile Island Unit 2 since the March 28, 1979 accident at the Londonderry Twp. reactor.

And events in the last 12 months have proven to be the most dramatic in the six-year, \$1 billion effort to rid the reactor of nuclear waste.

In addition to removing rubble that once was the Unit 2 reactor core, workers packed some of the debris into a specially designed shipping cask in preparation for removal of the debris from central Pennsylvania to a federal repository in Idaho.

And workers are now completing "core stratification," a process that involves drilling 3-inch holes into the reactor rubble so that samples can be extracted. Scientists want to know more about the accident, and TMI engineers hope to learn how best to complete the job of fuel removal.

Spokesmen for GPU Nuclear Corp., the company that also operates Unit 1, which has recently been running at full power, say the cleanup job at Unit 2 is proceeding well and is on schedule.

A brief description of recent events at Unit 2 follows:

Debris removal and shipment — A cleanup milestone was reached last month when the first train car-load of nuclear fuel particles, parts of fuel rods and other core debris was carted from TMI.

The 10-state, 2,400-mile trip ended at the Idaho National Engineering Laboratory, where the rubble will be studied by scientists and stored until permanent disposal plans are developed by the federal government.

Last month's trip was the first of about 40 in the next 2½ years that will be needed to remove an estimated 150 tons of core debris. The rubble will be transported in two identical shipping casks, dumbbell-shaped vessels designed to hold seven fuel canisters.

GPU Nuclear is responsible for removing core debris from the reactor vessel, loading the debris into defueling canisters and placing them into shipping casks. The U.S. Department of Energy takes possession of the debris as it leaves TMI and is responsible for its shipment to Idaho.

DOE officials said the "only problem" with the first shipment came when Nebraska Gov. Bob Kerry ordered the train stopped, complaining that Nebraska hadn't been notified about the shipment. He warned he would close his state's borders to future shipments unless officials there are notified in advance from now on.

A DOE official said Nebraska had been informed when the train was leaving TMI, but not told when it would approach the state line. DOE Terry Smith said seven states — Pennsylvania, Ohio, Indiana, Illinois, Michigan, Kansas and Nebraska — will be given more precise information on future ship-

ments because they have since asked for it.

Smith said two more shipments will be made to Idaho by summer's end, but officials say shipping timetables won't be made public for security reasons.

The shipments depended on another cleanup milestone — defueling — begun last November.

Since then workers standing on a platform about 15 feet over the reactor rubble have been using long-handled tools to scoop debris into the canisters. The workers are shielded from hazardous radiation by several feet of reactor water.

Once filled, the canisters are hauled from the reactor building and stored underwater in the adjacent fuel handling building. There they are loaded in the shipping casks.

By mid-August, 25 tons of debris — about 17 percent of the 150 tons left by the accident — had been removed from the reactor vessel.

Defueling was halted for one month this spring, as technicians worked to kill off a self-sustaining community of microorganisms that began to thrive in the reactor water. The organic materials had hindered the ability of workers to see what they were doing.

After testing many methods, officials found they could control the microbes with a combination of a high-pressure pump, a swimming pool pump and household-varying hydrogen peroxide.

Core stratification — Normal

canister loading was put on hold again in June so that specially trained GPU Nuclear workers could begin taking samples of the remainder of the TMI-2 core by use of a drilling machine.

TMI spokesmen said several samples, about three inches in diameter and up to six feet long, were obtained. The samples will be shipped in a package with regular debris to the Idaho laboratory for research.

The drilling is expected to enhance GPU Nuclear's understanding of the nature of the remaining core debris, considered important for planning upcoming defueling activities.

The company said a preliminary analysis indicates that while there is some "resolidified" core material — components that had melted then hardened again when cooled — in the rubble, the remaining debris is no longer considered as hard as it was once thought possible. The company also found that damage to reactor parts was less than previously expected.

The core drilling program and machines were developed by EG&G Idaho Inc., under a contract with DOE.

The program was completed in July. After the drill rigging was dismantled, normal defueling resumed Aug. 12.

Removal of contaminated water — Although GPU Nuclear has rid Unit 2 of about one-fifth of the solid fuel debris, it still must deal with 2.1 million gallons of radioactive water in reactor systems.

The company last month proposed to the U.S. Nuclear Regulatory Commission that the water be disposed of by an evaporation pro-

cess that would involve release of "small" amounts of radioactivity to the atmosphere, but would have no significant impact on the environment.

Radioactive residues left by the process, which the company said would be "a final, permanent disposal solution," would be shipped to a low-level waste burial site.

The evaporation would take nearly 2½ years and cost \$10 million. Plant officials hope to start early next year, pending a nod from the NRC.

The evaporation method is preferred by the company over two other methods considered. One is solidification of the water in concrete and onsite storage, which would take a year and cost \$6 million. The other involves releasing the processed, filtered water into the Susquehanna River.

The utility says none of the three options would have any significant environmental effects, and all would meet federal requirements.

The difficulties of each option, however, "have more to do with public perceptions and political and institutional issues than technical feasibility," the company said in a news release. "The public perceives the water to be uniquely hazardous because it contains radioactivity that is related to the 1979 accident at TMI-2."

The NRC is reviewing the evaporation proposal. The plan was to be discussed at a public meeting in Lancaster two weeks ago.

Accident-health questions — Studies by the state and federal agencies have indicated that the radioactivity that escaped during the TMI accident were too small to cause health problems. GPU Nuclear embraces those findings.

But in the years following the accident, personal injury claims were filed against TMI companies on behalf of 276 individuals. In settlement agreements announced in

February 1985 and approved by a Dauphin County judge, TMI's insurance carriers paid the 276 a total of \$14.3 million.

More claims followed. To date, law suits on behalf of more than 2,000 people were filed in Dauphin County Court, and health complaints range from migraine headaches and heart problems to various forms of cancer.

Two months ago, Dauphin County Senior Judge William W. Lipsitt determined that 12 test cases — six chosen by plaintiff attorneys and six by lawyers for plant owner General Public Utilities Corp. and related companies — would be heard by a jury, probably next spring.

The jury will hear how much radiation escaped from the plant during the March 28, 1979 accident and about health effects of radiation. In addition, jurors will hear the health stories of the 12 plaintiffs selected.

The test-case approach was advanced by the plaintiffs' attorneys, who said such a trial would pave the way for withdrawal or out-of-court settlement of the remaining cases.

Meanwhile, GPU Nuclear last month released a 48-page booklet the company prepared on the health effects of the Unit 2 accident.

The booklet — citing the findings of several major, independent studies — concludes that there have been no acute health effects and it is unlikely that there will be any long-term health effects.

GPU Nuclear said it intended to mass-mail the booklets to central Pennsylvanians.

But attorneys for the plaintiffs in the personal injury suits said such mailings would amount to "jury tampering" in the upcoming test cases, and filed for an injunction against it early this month.



Three Mile Island Legal Fund

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sends you
"Island Updates"

because we understand you are
someone who wants to know
what's happening at TMI.

Since this issue --

TMI-1 was shut down for
refueling and for repairs,
which should have been made
during the past 7 years.

GPU requested permission
to put TMI-2 in Post-Defueling
Monitored Storage.

The crust in the damaged
reactor refused to crumble
despite 400 4 1/2 inch
holes drilled in it.

Slime continued to grow
every time the TMI-2 core
was "mined."

NRC announced it will issue
its draft Environmental
Impact Statement this month
on GPU plans to boil two
million gallons of accident
water into our atmosphere.



The Patriot-News Co.

Raymond L. Gover
PUBLISHER

Ronald W. Minard
EDITOR

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PRESIDENT

Henry H. Young
EXECUTIVE EDITOR

A Free Press — Armor of the Republic

The Evening News, Harrisburg, Pa., Friday, December 12, 1986 —

TMI cleanup

GPU continues to have a credibility problem

GENERAL PUBLIC UTILITIES, the organization that made Three Mile Island a household word, spends enormous sums of money each year to polish the corporate image. And each year it manages to find one way or another to demonstrate that, despite a new name and new faces, it's the same old GPU with the same old problem — an inability to tell the whole truth and nothing but the truth.

On Dec. 4, the public relations arm of GPU Nuclear, operators of TMI, called a news conference to give an upbeat report on the pace of the cleanup operation at the damaged Unit 2 reactor. The same day the company ran a full-page advertisement in this newspaper, called "A Report to the Community," which stated in part that "the cleanup is making good progress." The ad outlined "plans for keeping TMI-2 safe, stable and secure" once cleanup is completed, which it said was expected to be in September 1988.

It turns out, however, that the most important part of the cleanup — removal of the congealed uranium fuel inside the reactor — is not progressing at all. Defueling, in fact, is at a "dead stop," according to William Travers, the Nuclear Regulatory Commission official in charge of overseeing the cleanup. Company officials acknowledge that defueling was halted on Nov. 26 when efforts to break up the hardened debris inside the reactor failed. Apparently defueling

had been halted during October and most of November, as well, because the fuel, which melted and hardened into a mass of material during the accident, could not be broken into small fragments for removal.

According to Travers, the problems with defueling cast doubt on the company's ability to meet what he describes as an "optimistic schedule" to complete the task of defueling in one year.

NO ONE thought that cleaning up the heavily damaged and highly radioactive-contaminated reactor was going to be easy. There never had been an accident on this scale before and it was taken for granted that much was going to have to be learned as the cleanup effort went along. If it was a simple task it wouldn't be costing an expected \$1 billion and be taking about nine years to complete.

What baffles us is why the information managers at GPU felt compelled to present an unsolicited upbeat assessment of the progress of cleanup when they knew at that very moment defueling was at a dead stop. Why didn't they tell us they had encountered problems? Why did the story have to come from other sources than the company itself? Why, in fact, did they shade the truth at the same time they claimed to be keeping us informed? Why, once again, is GPU not being forthright and honest with the people of central Pennsylvania.

Sunday Patriot-News, Harrisburg, Pa., August 31, 1986

The Patriot-News Co.

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A Free Press — Armor of the Republic

The people's voice

NRC should acknowledge public opinion

ONE THING the people of this area are not likely to soon forget about the long ordeal surrounding the restart of the undamaged nuclear reactor at Three Mile Island is how, in the final analysis, their concerns and fears really did not count. At various times during the five-year-long process, local people were told their votes didn't matter, psychological stress brought on by experiencing the nation's worst commercial nuclear power accident was irrelevant and that their views were not pertinent to hearings considering relicensing of Unit 1.

Now the Nuclear Regulatory Commission has decided that nuclear power plants should pose no greater risk to the general public than other risks in society and that people should not have to worry about living or working near nuclear plants.

A staff member of the Union of Concerned Scientists quickly called the policy "silly" and said it was an attempt "to quantify the unquantifiable."

But we don't think the new policy is silly at all in practice it results in increased bureaucratic sensitivity to the public's right to be treated as if its well-being is at the forefront of the NRC's priorities.

DEFENDERS of the NRC might argue that safety already is the agency's top priority, that it exists to ensure that nuclear power plants are safe. But the pursuit of that objective has been a matter largely left to scientists, bureaucrats and technicians to determine. The general public, though invited to make comments, generally has been excluded from the decision-making process. If the technocrats believed a plant was safe it didn't matter what the public thought or believed. To the bureaucratic mind that may

appear to satisfy looking after the public interest, but from the standpoint of the people who have to live with these decisions, the NRC is arrogant and dictatorial.

Some would say that if this country is to have a nuclear industry, it cannot subject decisions affecting the industry to public approval. But for whom are these multi-billion dollar investments being made if not for the people? In a democracy the people are supposed to have the right to decide what is in their own best interests, not a non-elected private corporation working in consort with a non-elected government agency.

THE PUBLIC, of course, cannot decide individual technical questions and issues. It can, however, look at the big picture and decide what it considers credible and what it doesn't. The American public, if anything, is receptive to technology and innovation. The Three Mile Island and Peach Bottom nuclear power stations were built in the Lower Susquehanna River Valley practically without a whimper of public protest. The great majority of the public accepted the nuclear behemoths as the safe, efficient and economical sources of clean energy they were touted to be by their corporate sponsors. When the accident at TMI demonstrated they were something else, the public responded by demanding, not unreasonably, a larger role in nuclear decision-making.

Accordingly, the worth of the NRC's new policy will be determined by whether or not the public is finally granted its demand to exert control over a technology that is too dangerous and important to be left entirely in the hands of bureaucrats and technicians.

The Patriot, Harrisburg, Pa., Thursday, August 21, 1986



James K. Asselstine
Cites TMI restart

NRC scored by member of panel

Associated Press

WASHINGTON — The Nuclear Regulatory Commission sometimes protects the atomic power industry more than the public and should work harder to assure the safety of nuclear plants.

Those comments by Commissioner James K. Asselstine came in an NRC memorandum made public yesterday by Stephen B. Comley, a Rowley, Mass., businessman fighting the planned start-up of the Seabrook, N.H., nuclear power plant.

Comley met with Asselstine last week and released a copy of a memo the NRC commissioner prepared for him, answering questions raised at the meeting.

"I believe that, in some cases, the NRC has acted more as the protector of the nuclear industry than the protector of the public," said Asselstine, a frequent dissenter in NRC decisions considered favorable to the industry.

Asselstine gave as an example the NRC's decision last year to allow the restart of Three Mile Island Unit 1. The Londonderry Twp. plant, closed since the 1979 accident at its twin Unit 2, resumed operation last fall.

Asselstine also included the NRC's decision to allow operation of the Indian Point plants in New York state, despite what he said were "continued significant deficiencies in emergency planning."

Asselstine said it was the commission itself, not its staff, that has sometimes failed to regulate the nuclear power industry properly.

Asselstine declined to comment directly on specifics of controversies concerning the Seabrook plant since many of the issues are pending before the NRC.



A three-minute egg



Three Mile Island Alert

Island Updates

News Watch on the
Harrisburg Area

VOL. 6 NO. 4

NOV '86 - FEB '87

The Patriot, Harrisburg, Pa., Friday, Dec. 12, 1986

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The Patriot, Harrisburg, Pa.

Thursday, February 19, 1987

3 at TMI penalized for drugs Suspensions given by firm

By Frank Lynch
Patriot-News

The operator of Three Mile Island Nuclear Generating Station yesterday confirmed it imposed 30-day "disciplinary suspensions" on three of its employees because of drug use.

Gordon Tomb, spokesman for GPU Nuclear Corp., said the three were suspended without pay Jan. 21 "after drug tests were administered to them for cause."

The employees work off site and are not involved in reactor operation or other safety sensitive areas, Tomb said. However, all three had access to the island on which the Unit 1 and 2 reactors are located, he said.

Tomb would not say whether drug use by the three while on the job was suspected, nor would he identify the drug. He said the employees must complete a drug rehabilitation program and will be subject to random drug testing for an indefinite time after they return to work this week.

News of the suspensions was made public yesterday in a routine U.S. Nuclear Regulatory Commission update on events at TMI Unit 1.

According to the report, GPU Nuclear in December informed NRC officials that the company was investigating an "allegation by an employee on drug use by other employees."

Tomb refused to say how the company came to believe the three were drug users. He added that GPU Nuclear does not typically publicize such actions.

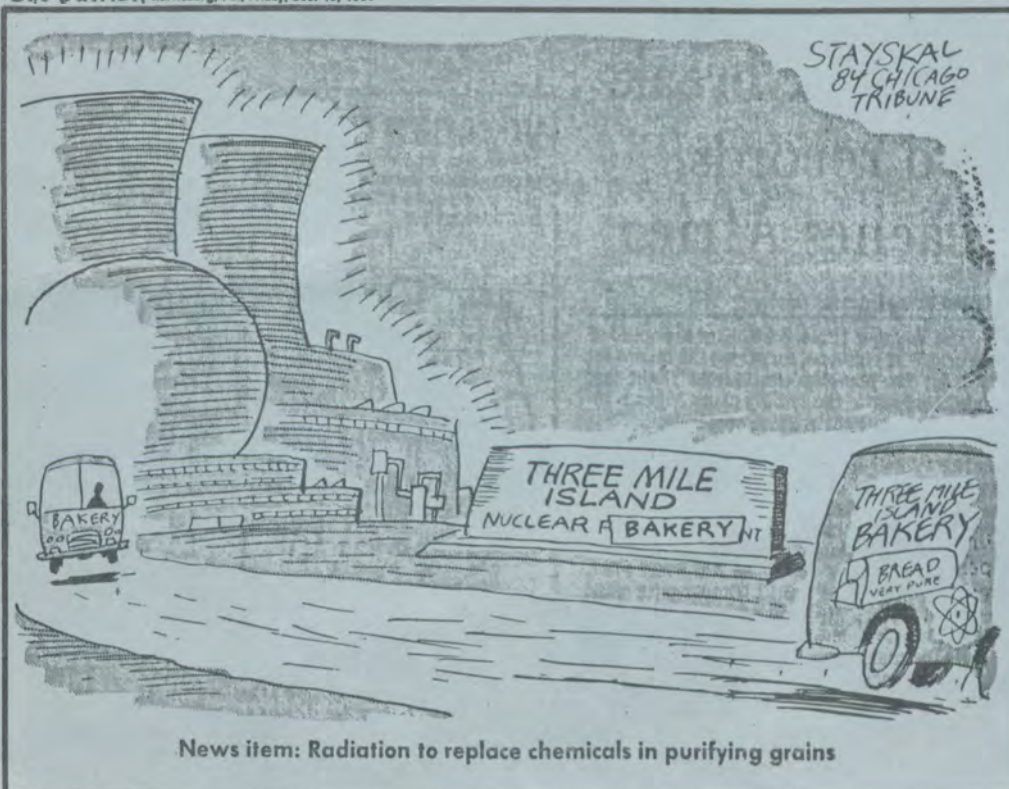
"These are personnel matters and a certain amount of confidentiality is involved," he said. "There is no safety question involved here, but it was clearly a violation of our policy."

That policy forbids GPU Nuclear employees from working while under the influence of alcohol or drugs, or possessing the substances on the job.

Last year, the company instituted a program in which managerial employees are randomly tested for drug use. Tomb said workers "we have reason to believe are using drugs or alcohol" also are subject to testing.

A company effort to randomly test its unionized employees was struck down in October by an arbitrator.

The Patriot, Harrisburg, Pa., Friday, Dec. 19, 1986



News item: Radiation to replace chemicals in purifying grains

Citizens rain criticism on GPU's evaporation proposal

By David Stellfox
Patriot-News

LANCASTER — The specter of GPU Nuclear Corp. evaporating 2.1 million gallons of radioactive water into the central Pennsylvania air prompted a strong reaction at a public forum here last night.

The evaporation plan and a U.S. Nuclear Regulatory Commission study of it and its alternatives were attacked and questioned by all citizens who were permitted to speak at the packed meeting.

A Middletown woman, unable to control her emotions during her comments, broke into sobs at the thought of "2½ years" of worry during the proposed evaporation process.

Members of the Advisory Panel for the Decontamination of Three Mile Island Unit 2 agreed to cancel a scheduled meeting next month with the NRC in Washington until the proposals are studied further.

Also, the panel agreed to ask the NRC to extend by 45 days the comment period on the proposed evaporation plan and its alternatives, which would allow until mid-April to register comments with the NRC.

Of major concern to the Susquehanna Valley Alliance, whose spokeswoman addressed the panel, was the possibility of transuranic radioactive elements in the water and the absence of information on them in the NRC study.

Frances Skolnick, SVA spokeswoman, said the NRC environmental impact statement ignored these elements. The NRC study addressed only strontium-90, cesium-137, and tritium, which William

Travers of the NRC told the panel were the three main radioactive elements.

Many citizens also expressed concern about the tritium, which attaches to the water molecule and cannot be removed prior to evaporation.

A Franklin and Marshall College physics professor, Alin Bruns, told the panel he also was concerned about transuranic elements, some highly toxic, that are formed as a part of the fission process when the reactor is operating.

Unit 2 operated for more than a month before the March 1979 accident.

Bruns said the dangers of these elements in even minute quantities "bears out the request to get some definitive statement on what is the transuranic contents of the water."

Murmurs of surprise went through the audience later in the meeting when panel member Thomas M. Gerusky asked GPU Nuclear Corp. to provide the panel with a detailed list of what elements are in the water "including the sensitivities of the instrumentation and everything that's in there."

Gerusky is director of the state Department of Environmental Resources' Bureau of Radiation Protection and is the member who prompted the request for more information and more time to study it.

He said he wanted to see the documentation behind the NRC study. "We need much more information before we can even be expected to comment," Gerusky said.

Many citizens who spoke, including Eric Epstein of Three Mile Island Alert, requested an independent analysis of the water. The panel did not decide whether to seek an independent analysis.

"People in this area have been dumped on enough. We're tired of being guinea pigs," Epstein said.

"The impact of the disposal of this water on our health cannot be seen outside the context of all previous, present and future releases of radiation into our environment..." Skolnick said.

Noting the NRC refusal to seriously consider reusing the TMI water inside another nuclear power plant, Skolnick said, "We were deeply horrified and insulted when Dr. Travers... informed us that this water was not pure enough for a nuclear power plant's pipes. However, it is considered adequate for our air and water."

GPU Nuclear's preference for disposing of the water calls for solidification of the remains after evaporation into concrete for burial in a low-level solid waste dump.

However, GPU's application for an emergency allocation of space in a low-level dump is pending.

Also, Travers said, GPU will need to go through a formal license amendment process before it can carry out whatever disposal option is finally decided upon.

The NRC study examined the evaporation proposal and about a dozen other options.

The Patriot, Harrisburg, Pa., Friday, February 27, 1987

Panel hears testimony on TMI-2 waste, plans forum in city

By David Stellfox
Patriot-News

LANCASTER — Three Mile Island Alert, the Susquehanna Valley Alliance and other anti-nuclear groups may testify at a special forum next month on proposals to dispose of radioactive water from TMI Unit 2.

The Advisory Panel for the Decontamination for Three Mile Island Unit 2, meeting in City Council chambers here last night, agreed to hold another meeting on the subject before making its recommendations, if any, to the U.S. Nuclear Regulatory Commission.

The advisory panel will meet at 6 p.m. March 25 at the Holiday Inn-Center City in Harrisburg and set aside four hours for the anti-nuclear or "safe energy" groups' testimony.

At the meeting last night, the panel accepted more testimony, primarily from the same groups. Most speakers were opposed to any release of the contaminated water into the environment.

GPU Nuclear Corp., operator of the damaged Unit 2, has proposed to the NRC to dispose of the estimated 2.1 million gallons of water generated in the March 28, 1979, accident by evaporating it into the atmosphere.

The utility on Wednesday formally applied for a license amendment required in this case to dispose of the water.

A preliminary environmental impact study performed by NRC staff examined about 12 options for disposal of the water, including evaporation, dumping into the Susquehanna River and solidifica-

tion for burial.

Dr. William D. Travers, NRC's deputy program director for Unit 2, has said repeatedly that all of the options presented negligible environmental impact and none was considered preferable.

However, Travers said, several steps need to be taken. He said the NRC staff will address all comments submitted and review additional water content analysis provided by GPU, as well as conduct its own analysis and possibly hold public hearings before making a recommendation to the full commission, which will make the final decision.

Some who addressed the panel suggested keeping the water stored in tanks on the island until its radioactive elements decay further.

Other suggestions included evaporating it over the ocean, where it would be more greatly diluted and where it wouldn't fall on a land mass.

Frank Standerfer, vice president and director for TMI-2, said the water is not safe to drink but could be released under current environmental standards if it were at any other plant besides TMI.

"This is not our problem," said Frances Skolnick, of the Susquehanna Valley Alliance. "GPU created it, so why are we being asked to carry it around in our bodies. It's as if we were being asked to be human waste storage sites."

One of the major elements in the water is tritium, a radioactive isotope, which attaches to the water molecule and cannot be removed by evaporation or any other known method of disposal.

The Patriot, Harrisburg, Pa., Thursday, January 15, 1987

TMI evaporation plan gets almost clean bill of health

By Jim Lewis
Patriot-News

If GPU Nuclear Corp. evaporates 2.1 million gallons of radioactive water into the air from its Three Mile Island Unit 2 reactor as planned, it will not have a significant effect on the public's health, a federal official said yesterday.

Dr. William Travers, the U.S. Nuclear Regulatory Commission's TMI cleanup director, said the water contains only small levels of radiation that would not significantly threaten anyone's health.

But an anti-nuclear citizens' group watching the cleanup of TMI wants the plant operator to store the contaminated water in the reactor instead of releasing it into the air or river, said Vera Stuchinski, chairman of the group, called Three Mile Island Alert.

"We want no additional radiation exposure to the area," Stuchinski said after Travers presented details of the evaporation plan to the group yesterday at the Friends Meetinghouse, Sixth and Herr streets.

The group will submit a written protest to the NRC, which is deciding whether it should allow GPU Nuclear to evaporate the water into the atmosphere, Stuchinski said.

The evaporation would cost from \$6 million to \$12 million, Travers said. The process would leave a residue that GPU Nuclear would ship to a low-level radioactive waste burial site in central Washington state.

GPU Nuclear hopes the NRC will allow it to begin the evaporation this summer, Gordon Tomb, a GPU spokesman, said. The process would take about 2½ years, he said.

GPU Nuclear also proposed two alternatives — dilute the wa-

ter and dump it into the Susquehanna River at a cost of about \$3 million, or solidify the water by mixing it with cement and burying the slab on Three Mile Island at a cost of about \$6 million.

Storage of the water in tanks would cost a maximum of \$1.2 million, but is not recommended, Travers said. Most of the radioactive water currently is stored in stainless-steel tanks at TMI, while the rest of it is used to clean walls and other sections of the reactor contaminated by a 1979 accident, he said.

But GPU cannot keep the water stored at TMI indefinitely because the tanks eventually will deteriorate, sending the water into the reactor and the ground.

"The NRC has had the policy, and a darn good one, that a reactor site ought not to be a long-term disposal site," Travers said. "Clearly, this storing for an indefinite period is not a good idea."

Travers said none of GPU's proposals, and other options considered by his staff, would cause large amounts of radiation to be released into the area.

"Even in the case of dumping it into the river, we just can't generate anything technically that says it's going to end with a catastrophe," he said. "None of the alternatives we looked at stand head and shoulders above the others as far as safety questions are concerned."

GPU Nuclear so far has been concerned with the public's safety while it cleans up the reactor, Travers said.

"We've had a very good experience with the way the company has done the cleanup," he said.

Stuchinski said many area residents just do not trust GPU since the accident happened.

The Patriot, Harrisburg, Pa., Friday, January 9, 1987

NRC publicizes November leaks at TMI's Unit 1

By Frank Lynch
Patriot-News

The Nuclear Regulatory Commission this week reported that "minor," unmonitored amounts of radiation twice escaped from an equipment hatch in the Three Mile Island Unit 1 reactor building more than a month ago.

The NRC publicized what it called the two "non-routine" releases to the atmosphere in its biweekly status report on Unit 1 activities. The releases, which occurred on Nov. 28 and 30, weren't previously reported by the NRC or the TMI operating company, GPU Nuclear Corp.

TMI spokeswoman Lisa Robinson said the releases weren't reported because they were "minuscule."

"We do [report events] when it would have some significance. And this is well below significance," she said. "These [releases] were so low they couldn't be detected by monitors outside the building. We saw no increase at all."

She said the radiation escaped from the building through a hatch that had been taken off to allow equipment to be moved. A tarp covered the hole while it was off.

Robinson said the release "wasn't planned, but you could expect to see it happen" with the hatch off. It since has been reinstalled.

Robinson said filtered releases from the plant occur routinely.

"The only thing different about this is they went through the reactor building hatch, which is normally in place when operating," she said.

Skip Young, the NRC's senior resident inspector at Unit 1, said the release did not violate NRC regulations and the amount of radiation that escaped was within NRC prescribed limits.

"It was not a normal release, it went out through the equipment hatch," he said. "It was not a violation, we want to characterize it as non-routine."

Normally, radiative releases are monitored and vented through filters, reducing the amount of radiation escaping to the environment.

According to NRC estimates, the Nov. 28 release of Iodine 131 and Cobalt 58 amounted to less than .002 thousandth of a percent of the quarterly limits. The Nov. 30 release of Iodine 131, tritium and Xenon 133 represented about .005 thousandths of a percent of those limits.

Since Oct. 31, Unit 1 has been down for a scheduled refueling outage. Among other testing procedures during the shutdown, 6,000 of the 31,000 tubes in the plant's two steam generators were tested for corrosion.

GPU Nuclear pulled from service, or plugged, 39 defective tubes. To date, 1,606 tubes have been plugged.

The plant is scheduled to restart in March.



"Yes, the plant had another radioactive leak but it was well within government levels and we'll vouch for that!"

The Patriot, Harrisburg, Pa., Wednesday, Dec. 17, 1986

Man injured as rack falls in Unit 2

A 36-year-old man working inside the reactor building of Three Mile Island's damaged Unit 2 was knocked to the floor and suffered skin contamination yesterday when a rack holding a lead-filled curtain toppled over on him.

The man, whose name was withheld by company officials, was taken to Hershey Medical Center by a GPU Nuclear Corp. ambulance and crew. He was released from the medical center after being treated for bruises around the neck, a medical center spokesman said.

The worker suffered radioactive contamination to his face and left leg, despite the protective clothing and respirator he was wearing, according to Gordon Tomb, a spokesman for plant operator GPU Nuclear Corp.

"It's really not clear to me how that [contamination] occurred," Tomb said. "It sometimes can happen when the clothes are taken off."

The low level of contamination, "less than a millirem," the man sustained can be cleaned with soap and water and requires no special procedures, Tomb said.

"The trip to the hospital was made because of his injury, not because of the radiation," Tomb said.

GPU declared an "unusual event" at 9:35 a.m. yesterday when the incident occurred.

Tomb said it appeared the worker had moved the 6-foot-high, 12-foot-wide rack, making it unstable. The semicircular lead curtain on the rack was being used to shield workers from high levels of radiation coming from an enclosed stairwell leading to the basement of the containment building of the Londonderry Twp. plant.

The worker was in a second-story level of the building and was operating controls of equipment that was rinsing contaminated walls and floors in the basement, Tomb said. Co-workers helped him up after the rack and curtain fell.

The "unusual event," the lowest of four levels of emergency used in nuclear industry, was declared ended after about an hour.

The man is an employee of Catalytic Inc. of Philadelphia.

Tomb said the Nuclear Regulatory Commission was notified of the incident and an NRC inspector had been present during an internal review of the incident.

The worker was taking part in cleanup efforts resulting from the March 28, 1979, accident at TMI Unit 2. During the accident, the reactor core was severely damaged when operator errors and mechanical malfunctions combined so that the reactor core overheated and radioactive gas was released to the atmosphere.

The Patriot, Harrisburg, Pa., Tuesday, January 13, 1987

TMI violations reported

NRC rates Unit 1 deficiencies as minor

By Frank Lynch
Patriot-News

The Nuclear Regulatory Commission has issued four violation notices to GPU Nuclear for deficiencies NRC inspectors found at Three Mile Island Unit 1.

The violations, described in two inspection reports mailed to the TMI operating company in the last two weeks, involve "minor" infractions of NRC regulations and posed no threat to public safety, said Richard J. Conte, chief of reactor projects for the NRC's Region 1.

"A safety-significant issue did not result" from the described violations, Conte said. He added that three of the violations are rated as Level 4 on a 1 to 5 scale, with 1 being the most severe. The other violation carried the lowest severity ranking, 5.

GPU Nuclear will not be fined for the violations, Conte said. The company has 30 days to respond to the notices.

Plant spokeswoman Lisa Robinson said company officials were reviewing the notices and would not comment on the substance of

the violations. However, she pointed to the balance of the inspection reports which, she said, were mostly favorable.

"We have had some good inspection reports from the NRC, even with these violations identified," she said. "What that says is that we are not perfect. What we're interested in is trying to be better by giving them [the violations] the attention they need."

Conte said the violations, described in NRC inspection reports for September and October, involved failure to:

- Follow procedures during periodic testing of the reactor's primary systems, in one case resulting in a valve misalignment;

- Properly protect the reactor building equipment hatch with a missile barrier, and to properly document radiation monitor "set-points" in the reactor building;

- Properly evaluate a modification in an electrical system;

- Provide radiation dose assessments for on-site personnel following a radiation release. The utility did, as required, provide such dose assessments for individuals outside the plant boundary.

Eric Epstein, spokesman for the anti-TMI group Three Mile Island Alert, criticized the utility for the violations.

"We think that the most recent NRC report indicates a failure by GPU Nuclear to pay attention to detail, and illustrates GPU Nuclear's continuing problems with the implementation of safety and technical procedures," he said.

Meanwhile, Robinson said yesterday that Unit 1 has reached the half-way point in its refueling shutdown.

Plant workers yesterday completed a 10-day operation to refuel the reactor, replacing 76 of the 177 fuel assemblies in the reactor's core. The reactor now has enough fuel to power the plant for the next 18 months.

The plant was shut down in early November for the planned 5-month outage. The reactor is expected to be restarted in March, she said.

Maintenance, upgrading the plant's fire protection system and other repair jobs will be carried out for the remainder of the outage, she said.

Proposed change in 'TMI rule' evacuation plans rapped

By Peter Kelley
Washington Bureau

WASHINGTON — The Nuclear Regulatory Commission asked for it, and political heavyweights came out swinging.

Four governors and more than a dozen members of Congress yesterday lined up to blast a proposal forwarded by NRC staff members to license nuclear power plants without state and local governments first approving emergency evacuation plans.

Sen. Edward Kennedy, D-Mass., protested that using utility-written plans instead, as the staff suggested, would "weaken, not strengthen" U.S. safety standards in the wake of the Soviet nuclear disaster last year at Chernobyl.

Kennedy warned the commissioners they may be overruled by Congress or the Supreme Court. He said the court might have to decide if the federal government has authority under the Constitution to force a community to accept a massive hazard in its midst without adequate protection.

It was the first time the NRC had invited comments from elected officials before deciding whether to follow a staff recommendation and change its rules.

The regulation that would have to be changed is known as the "Three Mile Island rule," which requires a state-approved evacuation plan before a nuclear plant operating license is issued.

Congress approved that regulation a year after the Unit 2 reactor on TMI, near Middletown, Pa., overheated in March 1979 and prompted thousands of central Pennsylvania residents to flee their homes in fear.

The proposed change would allow utility-written evacuation plans as "interim" substitutes for government plans, if they are "adequate" and "there are other compelling reasons to permit plant operation," NRC Chairman Lando W. Zech Jr. said.

If approved, the change could benefit owners of the Seabrook reactor in southern New Hampshire and the Shoreham plant on Long Island, N.Y. State and local governments in those areas have refused to approve required evacuation plans, delaying issuance of the plants' operating licenses.

William C. Parler, the NRC's top attorney, called the staff plan a "limited" change of existing rules allowing utility input. He said local help with emergency plans still would be "the desired course."

Zech said the NRC would not vote for "several days" on whether to submit the change for a 60-day public comment period.

Kennedy, followed by Sen. Daniel Patrick Moynihan, D-New York, and Gov. Mario M. Cuomo of New York and Gov. Michael S. Dukakis of Massachusetts, said the hearing seemed like a reunion of past and future presidential candidates.

Dukakis said the proposed rule change would be "the nuclear equivalent of cutting the number of lifeboats for the unsinkable Titanic because it would reduce the number of passengers and make the voyage unprofitable."

Cuomo quoted from statements made in 1980 by members of Congress and the NRC, indicating that states, to ensure safety in an emergency, in some cases may block a license for a nuclear plant by refusing to sign or cooperate with evacuation plans.

Several protesters from the area around the Seabrook plant were carried away by police and NRC security guards after they spoke out during the proceedings. Public comments were not allowed.

The Patriot, Harrisburg, Pa., Tuesday, February 10, 1987

No short cut

NRC plan would override local input

STATE AND LOCAL opposition to proposed emergency plans has effectively blocked two completed multi-billion dollar nuclear power plants from being operated.

The Shoreham plant on Long Island and the Seabrook plant in southern New Hampshire are two of the costliest and most controversial nuclear plants ever built. In each case, long delays in construction and cost estimates that were wrong by a factor of 10 or more have placed the principal utility investors in financial jeopardy, a position which is compounded by their inability to operate the facilities.

The fact that nuclear plants costing billions of dollars stand idle and may never in fact be used for the purposes intended reflects both an unconscionable waste of resources and the insanity of the nation's nuclear policy. But none of this will be put right by a proposal drafted by the staff of the Nuclear Regulatory Commission which would permit the agency to license plants over the objections of state and local authorities.

Indeed, until quite recently it was generally assumed that the federal government had pretty much a free hand to license nuclear plants as it saw fit. State and local approval of emergency plans, to the extent that they were taken seriously, was considered a formality.

NOT UNTIL Suffolk County, on the eastern end of Long Island, decided — in the wake of the accident at Three Mile Island — to adamantly reject the ludicrous notion that the county could be evacuated in the event of an accident at Shoreham was this avenue of opposition fully exercised. The problem here was that no one — not the utility, not the NRC, not the county, not the state — really appreciated the error of siting a nuclear plant in the middle of a congested island with New York City at one end and a ferry boat at the other until after the plant was in an advanced state of construction.

The problem at Seabrook was somewhat different. Here the opposition to the plant

was loud and clear from the very beginning. But the utility, backed by the state government, decided it knew best and would build the plant even if it meant calling out the National Guard, which it did. The Achilles' heel of the plan to operate Seabrook, aside from it being a financial disaster and possibly a mechanical one as well, was that a section of the 10-mile emergency planning zone around the plant dipped down into Massachusetts, where there was decidedly less enthusiasm for it. Thus Massachusetts, having seen what Suffolk County had done to Shoreham, found it had a tool to veto the operation of its nuclear neighbor.

If this seems like a slipshod way to build nuclear plants, that's because it is. But anyone who thinks that giving the NRC the power to override local objections will put all this silliness to rest clearly hasn't been paying attention. We are in this mess precisely because the nuclear decision-making process already works from the top down rather than from the bottom up. The rules are set up so that utilities and bureaucrats, rather than the people most affected, decide whether nuclear plants are built or not.

CONSEQUENTLY, people find themselves using whatever means are at their disposal to assert control over a major technological intrusion into their lives. The NRC can eliminate state and local approval of emergency plans but that isn't going to stop the public from finding another way to be heard.

The NRC compounds its failure to respect local public opinion by following an illogical two-step licensing process, one that separates the construction of a plant from its operation. If there is any doubt about a utility's competence to operate a nuclear plant, the time to find out is before the plant is built, not after.

But then, there is nothing very logical about the entire nuclear industry, and it may well turn into a dinosaur before it finally figures out why.

NRC asked to widen zones in plans for evacuation

By David Stellfox
Patriot-News

An area anti-nuclear group has asked the U.S. Nuclear Regulatory Commission to expand evacuation zones around nuclear plants.

In the face of increasing interest from utilities in reducing the zones, Three Mile Island Alert Inc. has urged the NRC in a letter to expand from 10 miles to a minimum of 20 miles the zones in evacuation plans that are to go into effect if an accident occurs.

TMIA claims its experience as part of the only community in the United States to be evacuated because of a nuclear plant accident qualifies the organization to speak on the issue.

"As a result of the TMI-2 accident, community residents, including TMIA members, feel strongly that evacuation planning needs to be upgraded and expanded . . ." wrote Eric Epstein, who authored the letter to NRC Secretary Samuel Chalk.

Epstein wrote that as many as 200,000 people from as far as 50 miles away are estimated to have evacuated in 1979 when then-Gov. Dick Thornburgh ordered only pregnant women residing within five miles of the Three Mile Island Nuclear Generating Station to do so.

The organization says of the TMIA area:

— Evacuation plans for school-children are incomplete.

— Plans are lacking for the elderly, blind and handicapped.

— Farmers, who are permitted to stay behind as emergency workers, have no insurance and no instruction in the use of radiation monitors and potassium iodine.

— The communication chain of command, as now structured, begins with the utility and "area residents are apprehensive about [GPU Nuclear Corp.'s] ability."

— Evacuation routes may not be adequate.

— Current evacuation plans exclude the cities of Harrisburg, Lancaster and York.

GPU Nuclear Corp. has no comment on the TMIA proposal or on other proposals to expand or reduce the emergency planning zones around nuclear plants, company spokesman Gordon Tomb said.

TMI fund

Judge deals setback to local concerns

GOVERNMENT OF THE PEOPLE, by the people and for the people perished a little bit last week.

In a seemingly innocuous and minor ruling, U.S. District Judge Sylvia H. Rambo denied a petition seeking local control over the \$5 million Three Mile Island Public Health Fund. Rambo threw out the petition, calling it "deficient" because attorneys for the fund were not provided copies and because the group of local officials seeking the ruling did not designate an attorney or spokesman. Nor, the judge said, did the petition include supporting briefs as required by local federal court rules.

Local officials had asked Rambo, who oversees the fund, to order an accounting of all expenditures by the fund, the removal of David Berger, the Philadelphia lawyer who has served as the court-appointed administrator of the fund, and the expenditure of \$600,000 in new radiation monitoring equipment around the nuclear plant. These substantive issues were not addressed by the judge in rejecting the petition.

IT IS ODD that Rambo would deny the petition on technical grounds because earlier petitions filed with her by Three Mile Island Alert containing similar "deficiencies" were not rejected on those grounds, though the petitions were denied. The deficiencies could have — and probably should have — been pointed out by the clerk of the court or the judge at the time of the filing of the petition three months ago. And certainly the judge

could have asked the petitioners to correct the deficiencies without denying the petition in its entirety.

Some of the confusion over procedure in the case apparently stems from the unique nature of the public health fund, which is all the more reason why local efforts to have a say in its administration should not be quashed on technicalities. Indeed, it seems to us the court has a legal and moral obligation to bend over backwards to insure that local voices are heard and that local concerns and interests are reflected in the projects undertaken with monies from the fund.

IT IS A SAD commentary on this whole business that the court has consistently rejected every local effort to have a say in the administration of a fund that was established to benefit local people, while approving virtually everything requested by Berger, who came out of nowhere to preside over the distribution of millions of dollars that has yet to produce a single effort of distinction.

This hardly serves the interests of the people who were subjected to one of the most frightening industrial accidents in history. It surely does not instill a sense that the government is acting in their behalf, protecting their rights and doing them justice.

We applaud the determination of local officials to refile the petition until it finally receives the consideration it deserves. They, and the people they represent, are entitled to a lot better treatment than they've been getting from U.S. District Court.

39 additional tubes removed from Unit 1

GPU Nuclear Corp. has taken 39 more steam generator tubes out of service at Three Mile Island Unit 1.

Company officials announced yesterday the completion of testing of approximately 6,000 heat exchange tubes in two steam generators at Unit 1 since an Oct. 3 refueling shutdown.

The 39 additional tubes plugged and taken out of service brings the number of plugged tubes in the two generators to 1,606 of the 31,062 total tubes.

The tubes, five-eighths of an inch in diameter, carry hot radioactive water that causes non-radioactive water outside them to turn to steam. The steam powers the plant turbine to generate electricity.

The tubes must be plugged according to U.S. Nuclear Regulatory Commission regulations when cracks exceed 40 percent of the walls of the tubes.

"The tests showed that there is no degradation beyond what can be expected in any operating nuclear power plant," said Henry D. Hukill TMI-1 director.

"The steam generators continue to be fully operational," he said.

Earlier this year GPU Nuclear was granted a one-time variance from the NRC regulation requiring tubes to be plugged when cracks exceed 40 percent of the thickness of the walls.

In April, GPU Nuclear took 25 tubes out of service after testing, and would have had to have taken out six more without the NRC variance.

The NRC allowed GPU to leave the six tubes operating with cracks up to 50 percent of the tube walls if the crack was less than one-fifth the circumference of the tubes.

Trial holds up report on TMI health effects

By Tom Dochat
Patriot-News

A GPU Nuclear Corp. report on the health effects of the 1979 Three Mile Island accident will not be distributed until a personal injury trial concludes next year.

In a joint statement issued yesterday, lawyers for the TMI operator and some 2,000 plaintiffs seeking damages from the company said a mass mailing of the report would be deferred until the Dauphin County Court case is completed.

The plaintiffs have sued GPU Nuclear and other companies for damages involving health problems they say they have suffered as a result of the March 28, 1979, nuclear accident.

The trial of 12 test cases — six selected by the plaintiffs and six by the defendants — is scheduled to begin next October before Senior Judge William W. Lipsitt. The trial originally was scheduled to start May 4.

Yesterday's brief statement said GPU Nuclear would defer mailing the report "so that there will be no basis for challenging the jury's verdict because of the mailing, and so that the issues will not be diminished by a tangential matter."

GPU Nuclear had discussed mailing a condensed version of a 48-page report called "Radiation and Health Effects: A Report on the TMI-2 Accident and Related Health Studies." The report, released last summer, concluded there were no acute health problems from the accident, and no long-term health problems are anticipated.

Lawyers for the plaintiffs had sought a court injunction to prevent the mailing because they felt it would hamper the jury selection for the trial. They said mailing the report to people within a 10-mile radius of the Londonderry Twp. plant would create a "prejudicial atmosphere" that might require a change of venue for the trial.

They also questioned the scientific accuracy of the study.

GPU Nuclear argued that an injunction would be an unconstitutional violation of its First Amendment rights. The company also said a mailing would provide nearby residents with a fair, unbiased and informative analysis of the effects of the Three Mile Island accident.

Lawyers for GPU Nuclear also said the report would offset some stories which have appeared about the accident.

NRC rejects request to ease tube standards

By Frank Lynch
Patriot-News

The Nuclear Regulatory Commission has denied a request by GPU Nuclear to relax standards for crack penetrations on steam generator tubes at Three Mile Island Unit 1.

The NRC's decision requires that the plant's operating company continue to remove from service all tubes with cracks or pits that exceed 40 percent the thickness of the tube walls. GPU Nuclear had sought a new standard allowing cracks 40 percent to 70 percent the thickness of the walls, depending on the length of the defects.

The steam generator tubes, about as round as a pencil with walls .03 inch thick, carry hot radioactive water through secondary water that turns to steam, powering the turbines.

The NRC's plugging criteria are designed to minimize the potential leaking of radioactive water into the secondary water, which ultimately is exposed to the environment as steam. GPU Nuclear contends their request, if implemented, would have caused no safety hazard.

Plant spokeswoman Lisa Robinson said company officials were weighing whether to request a hearing on the denial, which is to be published in the Federal Register. A separate hearing on the matter already is scheduled for March, and Robinson said a decision hadn't been made on whether to pursue that.

The NRC's decision was "good news" for leaders of TMI Alert, a local citizens' group. The group said GPU Nuclear's request posed a safety risk.

"I think it was a wise decision on their [the NRC's] part," said Louis Bradford, who led litigation for TMI Alert on the steam tube issue.

GPU Nuclear began its quest to relax the standard in November 1985, in a letter asking the NRC for the 70 percent change. The company also asked that tubes with 50 percent defects remain in service pending the decision on the 70 percent request.

The NRC last April granted the company a one-time license variance to leave in service tubes with defects 50 percent through the wall. That variance ran out Nov. 1, when Unit 1 was shut down for refueling and maintenance.



From Patriot-News files

More than 2,000 suits have been filed in Dauphin County Court attributing illnesses to the Three Mile Island accident

Scientist out to gauge TMI radiation

By Frank Lynch
Patriot-News

A new study has begun to estimate how much radioactivity escaped during the 1979 Three Mile Island accident.

The study's coordinator, Dr. Jan Byea, said he hopes his findings will "narrow the debate" on radiation releases and any health problems they may have caused for area residents.

The two-year, \$474,700 study will be funded by the Three Mile Island Public Health Fund. U.S. District Judge Sylvia H. Rambo, who oversees fund activities, has approved the study.

Byea, senior energy scientist for the National Audubon Society, said there is a wide range of estimates of radiation doses received by residents because of the March 1979 accident at TMI Unit 2. A combination

of human and machine failures resulted in an overheated reactor, causing releases of radioactivity into the atmosphere.

Current health-risk estimates vary widely, he said, because radiation monitoring data are missing or unreliable.

"If we are successful, we'll eliminate much of the uncertainty that was left after the accident," Byea said.

However, he said he doubts the debate over the health effects of the accident ever will be resolved.

More than 2,000 civil suits have been filed in Dauphin County Court attributing a variety of illnesses to the accident.

Byea's study will involve 17 groups studying different areas of argument. It is a follow-up to an assessment Byea conducted in 1984. In that project, he studied hundreds of reports and computer data bases to reach

radiation dose estimates arrived at by independent researchers.

Byea's proposal is the latest of several commissioned by the TMI Public Health Fund. The fund was set up in 1981 with \$5 million paid by TMI insurers to stop litigation against the nuclear plant's owner and related companies.

Fund Secretary Jonathan Berger said it is ready to commission one additional study, on the long-term stress experienced by those living near TMI. Berger said attorneys for the insurers have objected to that study, and the matter is in the hands of an arbitrator.

To date, Rambo has approved spending \$5,903,111 on studies, publications and information programs on radiation and nuclear power. Although \$3 million actually has been spent, interest accumulated on the original \$5 million has left more than \$5.5 million in the bank.

Motions remain undecided in TMI lawsuits

By Tom Dochat
Patriot-News

A legal sparring match yesterday left unsettled disputes between lawyers representing the two sides in the more than 2,000 Three Mile Island injury claims.

Lawyers spent about an hour discussing a defense request to dismiss some of the Dauphin County Court complaints filed by people seeking damages as a result of the March 1979 TMI accident.

They spent another hour debating a request by the plaintiffs for information from the operator of the nuclear power plant.

The issues are part of legal maneuvers by both sides in the TMI suits, which allege that people suffered mental and physical ailments as a result of the nuclear accident. Twelve test cases have been set for trial in October.

Attorneys for GPU Nuclear Corp., operator of the plant, have asked Senior Judge William W. Lipsitt to grant a summary judgment dismissing some 30 complaints because they were not filed within the two-year statute of limitations. The statute argument could affect as many as 1,200

complaints, said A.H. Wilcox, attorney for the defendants.

Lawyers for the plaintiffs say GPU "lulled their clients to sleep" by assuring residents there were no harmful radiation releases at the time of the accident. This assurance prevented the plaintiffs from immediately connecting their ailments to the accident, lawyers say.

Wilcox asked Lipsitt for the summary judgment because the complaints were filed more than two years after the plaintiffs knew about their diseases.

Wilcox added that some 300 people sued the operator of the Londonderry Twp. plant in 1979 or 1980, soon after they sustained diseases but without evidence that TMI was the cause. Now, he said, others have sued the TMI operator six or seven years later, "operating on no more information than the people who sued in 1979 or 1980."

Wilcox said the plaintiffs should have exercised reasonable diligence once their diseases were detected and should not be allowed to bring suit more than two years after the ailments were discovered.

But lawyers Lee C. Swartz and Arnold Levin discounted GPU's argument, saying their clients were victimized by "fraudulent

concealment" about the amount of radiation released from TMI.

Levin argued "we're dealing with people" who believed initial statements saying that no radiation releases were made. "Don't hold this entire community hostage because they chose to listen to Mr. Wilcox's clients," who "chose to lie," Levin argued.

"GPU told them they had nothing to worry about" and now Wilcox is saying "people should have known" within a two-year time period that their diseases could have been the result of the accident, Levin said.

Levin said he felt the defendants were stonewalling efforts to obtain information needed for the test cases.

Levin said he wanted various records relating to liability, causation and credibility, including interoffice communications before the publication of news releases after the accident.

But Wilcox said the plaintiffs have "gotten file drawers and file drawers and boxes" of information.

He added he felt the plaintiffs were trying to compound the complexity of the issue the trial jury will decide.

The Patriot, Harrisburg, Pa., Saturday, February 21, 1987

Hundreds of claims on TMI jeopardized as 35 are dismissed

By Tom Dochat
Patriot-News

In a ruling that could affect hundreds of other claims, about 35 cases have been dismissed from Three Mile Island litigation because plaintiffs failed to seek their injury claims within the two-year statute of limitations.

TMI officials said yesterday's ruling by Dauphin County Senior Judge William W. Lipsitt could affect hundreds of other claims filed outside of the time limit by people seeking damages because of the TMI accident.

TMI officials have argued that not enough radiation was released to harm anyone.

GPU Nuclear Corp., operator of the plant, had asked Lipsitt to dismiss some plaintiffs from the litigation on grounds that they violated the statute of limitations by filing suit more than two years

after the ailments they claimed were first reported to have been detected.

Attorneys for the plaintiffs have argued the connection between the illnesses and the TMI accident could not be determined immediately because the plant operator fraudulently concealed the severity of the radiation emissions.

But Lipsitt said in his opinion there was plenty of information available about the nature and extent of the accident.

"Plaintiffs knew on March 28, 1979, that an accident had occurred at TMI," Lipsitt wrote. "They also knew or should have known that exposure to radiation could cause adverse health effects. Indeed, by their own admissions in the complaints, plaintiffs knew an accident had

occurred and that exposure to radiation could cause adverse effects."

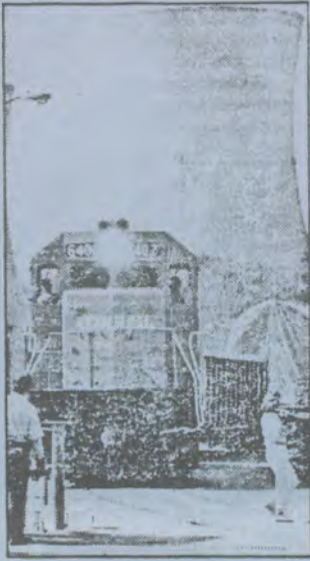
The plaintiffs said they "knew of their specific injury more than two years prior to the time they filed their complaint," Lipsitt added. "Thus, at that time they possessed the requisite knowledge to set the statutory clock running."

"Given the extent of information available to plaintiffs, their generalized allegations of concealment are insufficient ... and their claims must be dismissed as untimely filed."

Lee C. Swartz, an attorney for the plaintiffs, said Lipsitt's decision will be appealed to Superior Court. He said the decision "will not impact on a majority of the cases."

Twelve test cases — six selected by the plaintiffs and six chosen by the defendants — are scheduled for trial in October.

TMI debris shipments disturb many on route



From Patriot-News files
Damaged fuel leaves TMI by train

Associated Press

WASHINGTON — Shipments of 300,000 pounds of damaged radioactive fuel from Three Mile Island nuclear power plant are stirring debate along their 10-state rail route to an Idaho laboratory.

Two public meetings have been held to defuse tensions in a small Indiana community and two Missouri congressmen say federal authorities haven't done enough to ensure public safety and environmental protection along the route.

The Department of Energy is six months into a program to haul the radioactive fuel by train from the crippled TMI Unit 2 reactor in Middletown, Pa., to a federal laboratory in Idaho Falls.

Along the way, the fuel passes through Ohio, Indiana, Illinois, Missouri, Kansas, Nebraska, Colorado and Wyoming. At the lab, the material is analyzed by EG&G Idaho, an Energy Department contractor hoping to learn more about the nation's worst commercial nuclear accident, which occurred in 1979.

Three trips, each taking about five days, have been completed by the Conrail and Union Pacific railroads. There will be perhaps three dozen more in the next two years, according to EG&G spokesman Terry Smith.

The fuel, plus metal debris from the plant, is contained in canisters secured inside layered stainless

steel and lead casks designed to withstand accidents.

The cargo attracted special attention in the small Indiana town of Avon, on the outskirts of Indianapolis. Residents became alarmed when they learned last summer that the TMI freight would pass within several hundred yards of 3,000 students at four local schools.

"The Department of Energy made an error by just having the thing burst like a bubble on the Indianapolis area with very little explanation as to how or why," said Thomas Terry, superintendent of schools. "The public got into a little bit of an uproar."

A public meeting was held for residents to air their concerns, and another one took place this month. The department has delivered reams of explanatory literature "and it does now seem that just about every reasonable precaution is being taken," Terry said.

But as the clamor was dying down in Avon, Reps. Richard Gephardt and William Clay, both D-Mo., charged on Jan. 8 that the Energy Department failed to properly address the environmental and health implications of the shipments.

The Evening News, Harrisburg, Pa., Wednesday, December 10, 1986

Unit 2 defueling halted; drilling fails

From staff and wire reports

Defueling at the idled Three Mile Island Unit 2 nuclear plant was halted Nov. 26 when a large-scale drilling effort failed to adequately break up hardened debris inside the reactor vessel, a plant spokesman said yesterday.

Removing the once melted and now hardened core material resumed Nov. 24 after work in October and November designed to break up the material.

However, GPU Nuclear Corp. spokesman Gordon Tomb said yesterday that defueling was halted two days later because the drilling efforts did not adequately break apart the material into gravel-size fragments as expected.

The setback casts doubt on whether plant officials can maintain their one-year

defueling timetable as part of a plan to put the reactor in storage by late 1988, a federal official said.

"It's an optimistic schedule. That's particularly true in light of the more recent findings," said William Travers, who oversees the cleanup at the Londonderry Twp. nuclear facility's Unit 2 for the Nuclear Regulatory Commission. "The bottom line — do I think they're going to make it? It's not very likely."

Tomb said workers in October and November used a huge drill to bore into the crust in hopes of reducing it to easily removable pieces. After the drilling of more than 400 holes, workers on a stainless-steel platform atop the reactor began using scoops to bring up what they hoped would be the gravel-like waste.

However, after probing into the reactor, their tools came up empty or with only traces of material, Tomb said.

"What we found is that it didn't pull up like loose gravel," he said.

Officials halted the defueling process Nov. 26 and began using filters to clear the water to enable them to make a video inspection of the reactor, which was completed yesterday, Tomb said.

An initial inspection of some of the tape showed what appeared to be a rock 2 feet in diameter surrounded by compacted debris. Workers yesterday began cutting up remnants of fuel rods that were sticking out of the sides of the core. They will attempt to break up the rock and other debris this week, Tomb said.

The Patriot, Harrisburg, Pa., Saturday, February 14, 1987

Job losses loom as TMI cleanup draws to close

By Peter Kelley
Washington Bureau

WASHINGTON — General Public Utilities Corp. is finishing the billion-dollar cleanup of its Unit 2 reactor at Three Mile Island near Middletown, Pa., and planning to transfer or lay off approximately 950 workers at the unit.

David Judy, president of Middletown Borough Council, is not pleased by the prospect of lost jobs.

The Londonderry Twp. plant's vast employment needs have come to dominate the economy of the nearby borough, transforming what had been an Air Force center, from 1917 to 1977, to a virtual company town for the nuclear industry.

"It's news to me," Judy said yesterday when told GPU executives were in Washington, laying the groundwork for mothballing Unit 2 and keeping on about 50 long-term employees at the unit.

"I'm sure it was expected eventually there'd be some kind of reduction, but nobody ever said how many," he said. The Unit 2 work force fluctuates around

1,000 and currently is at 1,030, including contractors' crews.

Unit 1 employs about 700 people.

Gordon Tomb, a GPU spokesman, said at the firm's annual briefing on the cleanup that a 10 percent staff reduction was made at Unit 2 last year and another would result this year "through natural attrition, people leaving, and transfers."

The first big wave of transfers or layoffs, which Tomb called a "phase down," probably will come in the second half of 1988, he said.

"We still plan to complete the cleanup program by September 1988," GPU Nuclear President Philip R. Clark told the five-member U.S. Nuclear Regulatory Commission.

The most vexing problem in the Unit 2 cleanup to date — clouds of tiny organisms in the reactor water that reduced the workers' visibility by remote television to less than an inch — was solved last month by using hydrogen peroxide to kill them, and a dirt mixture to filter them out.

Crews also have wrestled with special drills to pierce an unexpectedly hard ceramic layer of melted fuel that initially kept them from reaching debris in the reactor's depths.

Clark maintained that no study has been given to Unit 2's possible reuse, and that the company assumes it will simply be guarded for at least 22 years, when Unit 1's operating license will expire and it either will be extended or the plant decommissioned.

The NRC currently is accepting public comments on what safeguards should be required once a nuclear power plant reaches the end of its useful life, a time span which itself has not been decided.

Only William D. Travers, ranking NRC staff member on the cleanup site, was willing to speculate that further unexpected delays could push the completion date back enough to jeopardize the project's \$965 million funding package.

Clark said the only hole in that package so far is a \$4 million shortfall in the \$83 million for research the Energy Department was expected to perform on the island.

The Patriot, Harrisburg, Pa., Tuesday, January 20, 1987

TMI worker hurt in fall from scaffolding

Officials at Three Mile Island yesterday declared an "unusual event" at the Unit 1 reactor after a worker's ankle was broken in a fall from scaffolding in the reactor building.

The unusual event, the lowest of four emergency classifications, was declared shortly after the 11:30 a.m. accident and was lifted at 1 p.m., plant spokeswoman Lisa Robinson said.

She said nuclear plant officials are required to make such an emergency declaration when an injured worker, who may have been exposed to radiation contamination, is taken off the site for treatment.

Robinson said the worker was tested at the plant for contamination, but none was detected. He then was taken to Harrisburg Hospital for treatment.

The worker, identified by a hospital spokeswoman as Ricky Peebles, 33, of Mechanicsburg, had a fracture and dislocated left ankle. Further tests at the hospital showed no signs of contamination, the spokeswoman said.

Peebles was listed in good condition yesterday and was expected to stay in the hospital overnight, she said.

Robinson said Peebles, employed by TMI contractor Catalytic Inc., fell about four feet from scaffolding he was building on the second floor of the reactor building.

TMI-1, shut down for refueling and maintenance, is scheduled to restart in March.

"ISLAND UPDATES"

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the FORUM

The Patriot, Harrisburg, Pa., Tuesday, Dec. 16, 1986

TMI is boring

EDITOR:

DON'T YOU THINK it possible to lay off TMI? It really is of interest only to timid souls, to little old ladies in tennis shoes and hysterical college professors.

For those who are so avidly concerned with human life, substitute coal mines as a subject for lachrymose discussion where hundreds are killed regularly. Add acid rain which is a greater threat than nuclear power.

These subjects I suggest are infinitely more appropriate if you must provide reading material for your sob-sister segment. After all, TMI long ago reached a point where a discussion of that subject was just plain boring.

F. E. Masland Jr.,
Carlisle

The Patriot, Harrisburg, Pa., Thursday, January 1, 1987

TMI coverage

EDITOR:

Frank Masland claims that the Patriot's continuing coverage of TMI is boring and he urges the editor to stop reporting or editorializing on the subject.

Masland's letters to the editor over past years make it clear that he should be regarded as an ideological brother to Lyndon LaRouche. Muzzling a vigilant and free press in the name of

non-boring news or a blatant profit motivation is a real threat to the best aspects of America. No fat-cat capitalist who lives and works a safe distance away from TMI has any right to call for censorship of the press.

Without the thoughtful reporting by the Patriot/Evening News, area residents and those whose jobs require them to work in the TMI area would have only the slick public relations claims by GPU to use as a basis for decisions affecting their health and safety. It was our misplaced trust and lack of concern prior to March, 1979 that allowed abuses by Met-Ed and others to disrupt our lives. I'm sure that the displaced and health-endangered residents and workers from the Chernobyl area would find Masland's arrogant elitism very similar to the pronouncements of Soviet technocrats.

—Gene Albright
Arendtsville

The Patriot, Harrisburg, Pa., Thursday, January 8, 1987

TMI statistics

EDITOR:

I feel the residents surrounding Three Mile Island should be awakened to the facts.

The death records for a seven-year period prior to the year 1979 should be reviewed. Then the death records from 1979 to the present should be studied.

These records which note the cause of death are kept on file in the Department of Vital Statistics.

In reviewing the comparison causes of deaths for these two

periods, I believe the latter period will indicate an increase is caused by some type of cancer.

Jan Byea, senior energy scientist for the National Audubon Society, presently is conducting an investigation to determine how much radiation was released seven years ago.

Cancer is an insidious disease. It isn't until the victim's disease has so advanced that symptoms indicate a serious problem. Then, in so many cases, it is too late to be cured.

Instead of thinking of the economical ways of producing power and energy, let's stick to the conventional old ways and discard nuclear power.

Let's save lives, not money. You know the old saying, "You can't take it with you."

—Ms. Lois Summers,
New Cumberland

The Patriot, Harrisburg, Pa.,

Wednesday, Dec. 31, 1986

GPU credibility

EDITOR:

The detailed explanation by Mr. Kinter of General Public Utilities detailed explanations on the stalled cleanup of TMI Unit II (My View, Dec. 26) isn't the biggest hurdle confronting GPU. First they have to figure out how to operate a nuclear reactor efficiently and safely.

In "my view" and the view of many others, GPU has never had any credibility in the operation of Unit I or Unit II. The Patriot is/was correct the first time.

—Jane Lee,
Etters