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## **Three Mile Island Resources**

**Title:** PANE Newsletters, 1984

**Date:** 1984

**Location:** TMI-Hossler

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Tell the governor to remain vigilant---1-800-932-0784, you don't have to give your name and address if you choose not, just give the county you live in. CALL HIM TODAY.

### THE GOVERNOR

Our last newsletter indicated our concern for what Thornburgh would say on August 15. We believe it was a gutsy speech but merely laid out the ground-work for the NRC to complete all "merit" items, meaning more hearings that already oppress volunteer intervenors and cause us to fund-raise to get the bucks together for legal assistance and other support. We'll summarize for you what he said on August 15, 1984----Hang on to this and check it out when it's time to "Jump a Hoop" again like we did on August 15. This could be the basis for a letter to Thornburgh when the next "hoop Jumping exercise" is scheduled and provide benchmarks or milestones to evaluate his and the NRC's progress:

1. Operator training, fully and properly evaluated to meet the highest standards prior to restart.
2. Emergency management system properly tested and certified prior to restart.
3. Conduct open hearings on whether the act that led to criminal indictment was directed or condoned by any members of current management of TMI #1 (We believe it should include anyone at TMI)
4. Evaluate alleged willful misstatements in the Keaten Report (GPU Internal document about the accident)
5. Deliberations on some operator training improvements and steam generator repairs have been completed.
6. Funding for TMI #2 (vague, remember clean-up will probably go more than the 1 billion dollars unless they babysit, if they ever get the fuel out)
7. All major safety issues resolved (vague)

Thornburgh said he believes the situation must be resolved on its merits, which means hearing records. That translates into more energy and money from you and me to the Three Mile Island Legal Fund to keep the cases going. One final note--the Governor referred to the 1979 TMI #1 shutdown order. He said it discussed the fact that "management capability and resources should be available related to TMI #2." We believe that is one opening that integrity and character can be brought to bear and say "We'll trust them to clean it up (sorta) but not to operate TMI #1 at the same time. The Governor delayed a restart decision, but it's coming and we're not sure he'll be around but you can count on PANE and the TMI Legal Fund.

### Fred Williams

This radio talk show has many discussions on TMI and nuclear power, tune him in Monday through Friday 10 a.m. - 2 p.m., WVLV 960 on the AM dial.

### RADIATION STUDY

The Three Mile Island Public Health Fund asked Dr. Jan Beyea of the National Audubon Society to conduct a critical study of public literature on TMI dose assessments. (A review of Dose Assessments at TMI and recommendations for future reasearch) The results of his study make it clear further work needs to be completed and he makes several excellent proposals. We are giving you a chance to make some observations about how the study was handled by local newspapers. We have enclosed the articles from the Beyea news conference that appeared in Harrisburg and Lancaster papers. We also had a PANE person read and summarize the document (2½ hours of reading). We'll let you decide whether the news media got the essence of the study as our PANE reader saw it. The Study is available from TMI Public Health Fund, 1622 Locust St., Philadelphia, PA 19103 (215-875-3026)

Dr. Beyea states in the preface that significant issues do remain unresolved-- issues that might bear on the ultimate health effects projected to occur as a result of the accident. The issues remain unresolved not because investigators were incompetent but because a great deal of crucial data does not exist or is unreliable. Following is a summary of items outlined in his report.

1. Some assumptions used to estimate the release of radioactive noble gasses relied solely on monitors in the TMI #2 Auxiliary Building, out of the direct path of escaping radioactivity, because the vent stack monitor went off-scale.
2. Met-Ed devices used to measure radiation (TLD's) left significant angular gaps through which radioactivity could have passed, partially or wholly undetected. A set of NRC TLD's showed a greater population dose than Met-Eds when compared.
3. The bulk of DOE helicopter readings donot begin until 2 days after the accident.



4. Estimates of the amount of radioiodine released was 15 - 30 curies but one analysis says it could be 5100 to 64,000 curies.
  5. In-plant measurements of released radioiodine show gaps in the monitoring data due to the loss of filter cartridges. 11 million curies of radio-iodine has not been traced.
  6. Related to radiocesium sampling, many readings from different sites show or are recorded to show exactly the same value making these readings suspect.
  7. Environmental sampling did not cover all directions from TMI accurately.
  8. Official studies easily accept monitor readings that may be open to question and reject a number of high readings without sufficient rationale.
  9. Monitoring equipment at TMI was poor and liable to error.
  10. Some data (radioiodine grass measurements) have yet to be officially analyzed.
  11. Official estimates for whole-body and thyroid population doses should not be regarded as final at this time.
  12. The collective dose for noble gasses when translated into cancer deaths could be 3.78 to 12.6 based on the lowest and highest data available at this time.
  13. Noble gas released estimates are from 2.4 to 10 million curies (about 1 curie of Krypton 85, a noble gas, is released from TMI #2 each day).
  14. The amount of radioiodine released from the vent stack for the first 15 hours of the accident is not known because the monitoring cartridges were lost or mislabeled. Further investigation reveals the raw data is suspect out to 42 hours from the start of the accident.
  15. In 1982 it was discovered a by-pass existed around the filters between the containment building and vent stack, discussed in 14 above. Steel plugs that were supposed to block interconnecting drain pipes were missing. In 1980 the holes were covered with "tuck tape" to prepare for the venting, but evidently there wasn't even tape in place at the time of the accident.
  16. There may be other unmonitored release pathways.
  17. Radioiodine found in a large sample of cows' milk is far too high to be consistent with official release estimates.
  18. Some grass measurements conducted by Dept. of Energy for radioiodine are so uniform as to suggest incorrect labeling.
  19. Grass and milk measurements were not taken uniformly in all angular sectors.
  20. Since the NRC recently increased their estimates of projected occupational dose by a factor of 6 it is probable that population dose estimates should be reviewed.
  21. Met-Eds consultants, at the time of the accident, Woodard and Potter did not include all TLD's in computing a total release of noble gasses.
  22. The DOE helicopter readings may have missed the center of the plume and did not measure vertical distribution of radioactivity in the plume.
  23. There were no NRC TLD's in place before March 31 (accident occurred 4 a.m., March 28).
  24. Information that was used for official estimates that came from Met-Ed TLD's is suspect.
  25. Five known discharges into the river were not sampled for radioactivity, including one from the start of the accident at 4 a.m. until 9 a.m., although a radiation alarm did not go off, assuming it was working, it can be assumed the releases were small.
  26. Iodine release data for the first 15 hours of the accident is missing.
  27. 760 people had "whole body counts" conducted beginning on April 10, 1979, the Kemeny Commission staff did not think highly of the procedures followed and tended to discount the measurements.
  28. A prediction of the amount of radioiodine per gram of grass is about 4 times higher than a measurement made by Met-Ed at a location nearby (midway between two vole sites).
  29. W.P. Kirk local EPA person is noted for a sarcastic letter of criticism of a vole experiment on pg. C48 of the document.
  30. An appendix discussed the practice of leaving reactor building doors open during personnel entries. It appears both doors of one airlock are kept open during building entries to expedite worker egress. The potential for releases is even more significant if the equipment hatch remains open for certain operations. See pages F-5 and F-6, of the Beyea report.
  31. Between 56 and 183 fuel cask shipments will be needed to remove fuel and fuel debris. FANE wonders if the casks are built??
- In summary the report says best efforts have not been made yet to determine if high readings have been rejected justifiably and if informed criticisms have been given a response. Dr. Beyea recognizes TMI area residents have been waiting 5 years for information they can trust. At the time of the accident most investigators did the best they could in spite of gaps in the available data. Regarding TLD data, Beyea asserts, "there is enough justification to make a plausible case for throwing all the data out for one reason or another." Studies of the releases at their source rely on monitors far from



the escaping radioactivity. Studies done from environmental monitoring are flawed because of angular gaps in TID coverage not corrected until 3 days after the accident. Beyea says "Data at TMI is so sparse that none of it should be ignored unless there is convincing evidence that it is completely useless."

Now that you have information that PA&L thought would be important in writing a news article-----read the two newspaper articles.

# Physicist disputes TMI health

Harrisburg Patriot

By MARY O. BRADLEY/Staff Writer

A nuclear physicist says data he reviewed does not support the "official record" that no health effects will result from the Three Mile Island accident.

But, Dr. Jan Beyea said, he found no evidence that "large numbers" of residents will be affected adversely by radiation from the accident.

He said further studies are needed to answer questions about the amount of radiation released and its effect on residents.

Beyea's study, released yesterday, was based on a comparison of 100 dose assessment reports published by various groups and individuals after the 1979 accident.

Beyea said he found gaps in base data about the amount of radiation released during the accident and "methodology flaws" in the reports. It has generally been accepted that gaps in radiation monitoring occurred during the accident.

The study, which took two years, cost \$100,000. It was paid for by the TMI Public Health Fund.

Blue-ribbon panels which investigated the accident concluded that the radiation dose to off-site general population was 70 millirems, which would cause no health effects.

Residents receive about 100 millirems of radiation annually from natural background sources.

Beyea said he and the six scientists and engineers who assisted him did few independent calculations in the study released yesterday.

"The scientific record [reviewed by Beyea and his panel] does not support the official record that no health effects" would result, Beyea told a news conference in the Holiday Inn-Center City. Beyea is a nuclear physicist and a senior staff scientist at the National Audubon Society.

But, he added, "no evidence" was found in the scientific record that a "large number of people" had been affected by radiation.

Beyea said the "early assessment" of no fatal cancers "killed" a complete study of the available data. Beyea said he "found an enormous amount of data" that was never analyzed.

He recommended additional studies on dose assessment, including gathering new data from whatever sources are available.

The TMI Public Health Fund was created from \$5 million of a \$25 million settlement of a class action lawsuit stemming from the accident.

A purpose of the fund was to address public health issues of research and education to resolve outstanding issues about the accident.

Because of earned interest the amount of the fund as of May was \$6.6 million.

Between November 1981 and May 1984, the fund spent \$451,992 on projects and consultants' fees.

All expenditures must be approved by U.S. District Court Judge Sylvia H. Rambo, the fund's supervisor.

report

## TMI Health Studies

### Flawed, Expert Says

Lancaster I. 111 8-30-81

HARRISBURG (AP) — Official statements that radiation from the Three Mile Island nuclear accident caused no adverse health effects cannot be justified, according to a court-supervised study released Wednesday.

Official and unofficial estimates of how much radiation the plant's neighbors received vary widely and are all based on incomplete evidence, said Dr. Jan Beyea, a nuclear physicist who conducted the \$100,000 review.

The study commissioned by the TMI Public Health Fund analyzed 100 reports regarding radiation releases during the 1979 accident.

"I found methodological flaws in every report," said

Beyea, a staff scientist at the National Audubon Society. He added that the flaws were "not surprising given the pressure for quick answers after the accident."

TMI's Unit 2 suffered the worst accident in U.S. commercial nuclear history in March 1979, when its reactor core overheated and radioactive gas escaped into the environment.

The largest estimate of the population's radiation "dose" from the accident is more than 200 times greater than the smallest estimate, he said.

The federal Nuclear Regulatory Commission has concluded that radiation from the accident

would result in no deaths from cancer.

But based on the available evidence, the number of cancer deaths due to the accident could be anywhere from zero to 130, Beyea said.

He called for further study in 16 areas. The research would include collection of "private data," such as readings from radiation-sensitive film badges used by dentists and X-ray workers. Scientists also could analyze bricks on houses in the area to measure any absorbed radiation, he said.

"There's a lot of private data that we believe exists," he said.

Beyea acknowledged that further study could confirm the official finding of no adverse health effects.

Until then, he said, "If the data is not there, we should not pretend it is there."

Lisa Robinson, a spokeswoman for TMI's operator, GPU Nuclear Corp., said the company had only recently received the report and refused to comment on it.

One of the flaws in the official investigation of the accident was the assumption that radioactive iodine inside the reactor building was trapped by filters, the report said. Subsequent information indicated that the radioiodine managed to bypass the filters, the review said.

The Public Health Fund was formed in 1981 as part of a settlement of a class-action suit against General Public Utilities Corp., the plant's owner, on behalf of residents and businesses within 25 miles of the reactor.

It was financed with \$6 million from the \$31 million settlement and is supervised by U.S. District Judge Sylvia Rambo.

The fund's attorney, David Eerger, said the fund would ask the judge to approve spending about \$500,000 to pay for the studies Beyea proposed.

### Entries Planned At TMI II

MIDDLETOWN — Entries into the Unit-II containment building at Three Mile Island Nuclear Station are planned for Thursday and Friday, September 13 and 14.

Venting of the containment building is continuous and the release of krypton 85 will be approximately one curie per day.

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# PANE

A citizens' public interest organization  
of the Middletown area

THREE MILE ISLAND

## Clean it. Close it.

JANUARY 1984

### PANE MEETINGS

February 19, 1984 and March 11, 1984, 7 to 9 p.m. at Frey Village Guest House, 1020 N. Union St., Middletown. Mark your calendars and plan to attend.

### CONCERNED MOTHERS

Several mothers continue to meet with Lake Barrett of the NRC at least monthly. If you would like to join them in a meeting, telephone Paola Kinney at 939-3312.

### PANE PERSONNEL

Marcella Heicher is now functioning as our recorder of minutes, Al Manik as our Legal Fund representative (until June 30, 1984, Jim Hurst remains as Legal Fund treasurer) and each PANE board member will rotate through for each PIRC meeting (thereby increasing our communication among each other).

### PIRC PLEDGE CAMPAIGN

PIRC needs pledges, names of people to contact for possible pledges, and people to make the phone calls. Call PIRC today at 233-4241 and ask for Laura Pollock. If you pledge money you'll receive the monthly PIRC newsletter--which is excellent.

### ANNIVERSARY ACTIVITIES

PIRC is now planning for a Women's Pot Luck Dinner on March 18 at Lakeside Lutheran Church--this is tentative so call PIRC for details at 233-4241. Other activities being planned are national speaking tours, benefit concert, public forums and vigils--if you can help or need more information call PIRC today.

### PANE COOKIE SOCIAL

It was held on January 8 at Frey Village. We had a nice time. There were alot of OREO's and Keebler Chocolate Chip types, but some brave souls like Doris Kovalic came through with fresh, home-made cookies that were simply delicious.

### MET-ED/GPU LEAK RATE CHEATING

As you know our government has charged GPU with falsifying safety test results, destroying test records and violating operating procedures for months before the March 1979 TMI #2 accident. On November 18, 1983, GPU pleaded not guilty to the charges. As a result the U.S. District Judge set January 3 for jury selection. The original charges were brought by a federal grand jury on November 7. On December 19, 1983, GPU filed pretrial motions asking the federal judge to dismiss the charges, the trial, if held, be in New Jersey or Delaware, and that a 5 month delay be granted. Paul Rhoads an area attorney represents GPU. As a result of this GPU move, the federal judge gave the U.S. attorney until January 9 to respond to the GPU pretrial motions, thereby delaying January 3 jury selection. The U.S. attorney on January 9 opposed all of the GPU requests and GPU was allowed to file additional written arguments on January 17, 1984, at that time the federal judge will set a date for oral arguments. No trial date will be set until the judge rules on the pretrial motions. So once again GPU uses its money to delay, delay, delay.

### MORE MONEY FOR TMI #2?

On January 11, 1984, Met-Ed and Penelec have asked the P.U.C. for permission to use 15.8 million more of ratepayer revenues to fund the cleanup. The change, according to GPU, would not increase customer rates because it would shift money that was to be used to pay off the investment in Unit #2. Met-Ed and Penelec are already diverting 20.7 million from their amortization funds.

This newsletter was typed on January 14, 1984.

### TMI #1

An emergency drill was held on November 15, 1983 at TMI and involved area communities. The drill lasted 6 hours and involved 2,000 people in a 5 county



area. Officials reported some failures to communicate and delays but said things went well. The Lancaster County Emergency Management chief said some of the volunteer personnel "lost their enthusiasm" because the emergency lasted 6 hours. He also said he failed to read an emergency status report because it got buried in a stack of papers. Conoy Township reported one telephone line was not adequate for its emergency center. On December 1, 1983, The Lancaster Environmental Action Foundation, a 154 member organization that operates a recycling center, released a statement calling for the permanent closure of TMI. On December 5, 1983 the NRC staff recommended that GPU be allowed to restart TMI #1 once an NRC investigation showed that none of the operators currently employed at Unit 1 had falsified 1978 and 1979 records. This investigation was to have been completed by the NRC Office of Investigation (OI) but was suspended on January 10, 1984. We have read several OI reports and are very concerned about the willingness to really dig into an issue. Getting back to the NRC staff recommendation (Harold Denton)---said they felt if the above were satisfied TMI #1 could start operation at 25% capacity, Denton said he thought GPU could be ready to operate in February. He said he would place 7 NRC inspectors at TMI, 24 hours a day. He said TMI #1 would be allowed to operate at full power only when several other investigations on management prove that GPU can operate a plant. He felt OI could complete those investigations by April. GPU didn't like the 25% proposal because for TMI #1 to be put in the rate base by the PUC it must operate at 30% for 100 hours. A December 27, 1983 a Patriot article said the Governor will oppose plans to put TMI on line before his concerns are put to rest. He said his position remains the same as in 1979. . . "unless and until I'm assured that there are no adverse health, safety or environmental consequences of any restart, and unless and until the funding for the cleanup of Unit #2 is in place and assured." On January 10, 1984, GPU announced its budget for TMI #1 in the calendar year 1984 would be 103 million (TMI #2 1984 calendar budget is 77 million). 86 million was budgeted for TMI #1 in calendar 1983.

#### BOB ARNOLD

The President of GPU Nuclear has been transferred to a non-nuclear position within GPU. The Philadelphia Inquirer called the move "a head rolls gently at TMI." The irony is the Rickover Report prepared for GPU said GPU senior management was ship-shape!!! The Inquirer reports a 1978 GPU audit stated the "quality of operating personnel is on a continuous downward trend." Yet at the B & W/GPU trial Arnold said the training program was acceptable. The trial judge later said "The operator training here was pretty atrocious." Corporate integrity of GPU deserves more scrutiny than the mere "reassignment" of one man.

#### RICKOVER REPORT

This 41 page piece paid for by GPU (\$75,000) was completed in mid-November. The report excluded TMI #2 cleanup and accident. As a result Rickover's writing is simply a review of paper and interviews with staff about procedures. An example is that GPU training staff has increased from 7 to 55. Radiation control team from 10 to 47. What's really interesting is that Rickover says managers believed at the time of the accident that GPU was deficient in training, maintenance and quality assurance. So why didn't they say anything??? Can you believe that will not happen again???

#### PANE AND THE TMI PUBLIC HEALTH FUND

Al Manik represented us at this December 15, 1983 meeting that had world class scientists in attendance who are going to conduct a \$785,000 study to design better radiation monitoring around TMI. PANE's comments focused on the fact that the written document detailing the study made it appear our major concern is radiation. PANE made it clear that we support the complete decontamination and defueling of TMI #2 and that we believe most of the anxiety, fear and mistrust of GPU would cease if TMI #1 were never to operate. We also formulated several questions for the Fund to answer. One of our supporters from Colorado gave us information on a "conflict management" firm that is to work with the community and we feel more positive about their presence. We made it clear, to the Fund, that we welcome improved radiation monitoring but that this is a secondary concern and will certainly not ease anxiety in the area. PANE has learned that the 5 million dollar fund (now at 6.5 million with interest) will mostly go to study cancer risk from the accident. The first part is this one on monitoring, next the Fund will try to get new estimates on radiation released during the beginning of the March 1979 on-going accident at TMI. The current study is to be completed in 2 yrs. (copies of PANE's comments and an article on the Fund from Science is available from PANE for \$1.00 to cover postage and printing---P.O. Box 268, Middletown, PA 17057



#### SPECTER HEARING

On December 16, 1983 the Senator held a hearing in Harrisburg on TMI. Paola Kinney spoke for PANE and Joyce Corradi represented the Concerned Mothers of the Middletown Area (copies of comments are available for \$1.00 to cover postage and printing) Pressure exerted by all of us with our phone calls, letters and presence at the hearing caused the NRC to delay a late December meeting until January at which TMI #1 would be discussed. Specter really "laid into" the NRC at the hearing and we note that he had private meetings earlier in the week with GPU top management; however, none with us. We sense that his real mission may be to push NRC to make a decision for restart but we caution you that we only sense it. Commissioner Gilinsky was at the hearing and expressed doubt that the NRC would vote on TMI #1 until after he's gone June 30, 1984. At the hearing, GPU claims they now have 900 workers at TMI and in 1979 only 300. The question we all had after hearing GPU was, can they really take independent actions to police themselves? Heck no.

#### TMI 11

The 11 citizens who were arrested at TMI on May 18 for peacefully blocking the gates at TMI in 1983 will have to appear before the state superior court in the next few months. The case was "passed up" from Dauphin County Court because the judge felt there were substantial arguments for both sides. The 11 are pleading self-defense because of the imminent threat of operation of TMI #1. They face charges of a misdemeanor. The 11 believe their offense was committed to avoid a greater harm, certainly an acceptable feeling among thousands of TMI area residents.

#### TMI 2

The NRC gave permission to GPU to go ahead with the load test for a crane that eventually would lift the top off of TMI #2. The word came on November 18, 1983. The load test was delayed while NRC investigated charges by Rick Parks and others. In September 1983, NRC said TMI officials had indeed not properly reviewed all data on the crane. The load test will have the crane pick up 200 tons. The reactor head weighs 163 tons. Meanwhile . . . The 12,000 page, \$500,000 independent GPU report prepared by Edwin Stier, a former director of the N.J. Division of Criminal Justice and we have heard, was an attorney for Jersey Central Power and Light (a GPU subsidiary) says that no deliberate safety shortcuts were taken. We believe that deliberate shortcuts were taken and since no one was allegedly hurt, yet, Stier added the word "safety". We believe the mentality of the report was basically that since no one was hurt, surely there were no safety shortcuts---yet NRC reports said procedures were circumvented and we say thank goodness for the Kings and Parks because it is going to be a long, complex and expensive decon job at TMI #2. Meanwhile . . . The TMI #2 Advisory Panel now chaired by Lancaster Mayor Art Morris has voted to oppose NRC consideration of TMI #1 operating until funding is arranged for TMI #2. It was a 5 - 1 vote with one abstention on December 8, 1983. The Panel said it must be a committed funding plan. Voting in opposition was Anne Trunk a Middletown resident and wife of Ed Trunk, a Penn State Capitol Campus engineering instructor. Tom Gerusky of DER abstained. GPU felt the panel's action was a negative approach and said operation of TMI #1 would save about 500 KW a month (Met-Ed customers \$1.49 a month) and by putting TMI #1 back into the rate base \$98 million more dollars would be available to the GPU system. GPU also said 176.9 million in energy savings would be realized annually because they would not have to buy replacement power (Met-Ed 80.4, Penelec 38.1, and Jersey Central 58.4) GPU also said by putting TMI #1 on line (16.2 million from Met-Ed and 4.7 million from Penelec) 20.9 million on additional money could be earmarked annually for TMI #2 work. The meeting also revealed the load test of the polar crane should occur in February and then the next step would be to lift the head of TMI #2, that would take about 1/2 a day and cost 5.2 million for planning and implementation. During the head lift 13 tons of lead blankets will be utilized to keep radiation levels at low levels.

#### TMI #2 FUNDING

Calendar 1983 saw 76 million spent on TMI #2 decon work. 1984 projects a 75 million dollar expenditure. GPU will use up the last of its remaining money from the 300 million of insurance money. The calendar 1984 budget is composed of DOE - 14 million, EPRI - 1 million, Pa. taxpayers - 5 million, N.J. taxpayers - 2 million, and 33 million from Pa. and N.J. ratepayers. That totals 55 million and GPU is expected to make up the remaining 20 million. Although we should note Japan will probably kick in about 3 million this year ---it remains to be seen whether this will be part of GPU's 20 million or added to the 75 million. Germany and France may also send money. A side



note is when Japan sends the bucks they also will send 22 engineers. Is it possible the language will create some problems in an already very complex decon/defuel at TMI #2? Meanwhile. . . GPU says there is a 5 foot void in Unit 2 that extends nearly to the edge of the core and that no fuel assemblies remain intact. They say there was no evidence of melted fuel. The core is 12 ft. deep and due to its collapse created the void. Some metals had melted (stainless steel - 2,550-2,600° F) while uranium oxide melts at 5,080 degrees. GPU says 2 of the 177 fuel assemblies could possibly be intact. Meanwhile. . . NRC has released a draft for comment that says the estimated radiation dose for workers will be between 13,000 and 46,000 person rems compared to the first projections in 1981 of 2,000 to 8,000 person rems. As a result the cleanup work force faces the possibility of 2 to 6 fatal cancers, 3 to 12 non-fatal cancers and 3 to 12 genetic effects to off-spring. We believe you should review the draft and comment, particularly on the fact that there has been a shift in the approach NRC and GPU will take to the work at TMI #2. Write or visit NRC TMI Program Office, 100 Brown St., Middletown, PA 17057 and ask for Nureg-0683 Supp. 1 and Nureg-1060 or phone them 717-948-1150 in Middletown. Read Nureg 1060 very carefully to see how the approach has changed. We have some concern about how much decon work will be done after the fuel is removed. Meanwhile. . . the proper decon and defueling of TMI #2 is of great importance to Chesapeake Bay residents. The Philadelphia Inquirer of December 10, 1983 says the Bay is the source of 1/3 of the nations oyster harvest and half of its blue crabs.

IRS ACTS

The IRS says any contributions by other utilities to the TMI work can be considered tax deductions. One road block though may be public utility commissions in each state. Governor Thornburgh asked for 190 million in industry contributions. An electric utility trade association (EEI) said in 1981 they could raise 150 million. They had only succeeded in getting pledges of 60 million but now the tax write-off may spur more activity.

TMI #2 WASTE MANAGEMENT

You'd think after reading the Rickover Report and listening to Kuhns and the GPU brass that things were really going well on the island. Well the December 12, 1983 NRC weekly status report says a radioactive liner from the Epicor System was not sent to Hanford, Washington; It had "contact radiation levels in excess of limits". Oh well, it must be real tough to monitor the radiation on those liners.

TMI #2 FUNDING

According to DER's Tom Gerusky here is how the funding for the cleanup of Unit 2 breaks out:

Thornburgh Plan 1981

Promised as of January 13, 1984

Edison Electric Institute (EEI)	- 190 million	65 million
Dept. of Energy	- 190 million	159 million
GPU	- 245 million	170 million
PA	- 30 million	30 million
NJ	- 15 million	12 million
Insurance	- 90 million	90 million
	760 million	Japanese 18 million
		B & W rebate 37 million
		581 million

PANE believes the cost of decontaminating TMI #2 will exceed 1 billion dollars. We are puzzled by the 90 million listed under insurance. TMI had a 300 million dollar insurance policy for cleanup which is now just about depleted. GPU's 75 million dollar 1984 calendar year budget for TMI #2 breaks out this way: DOE - 15 million, customer revenues - 37 million, PA taxpayers - 5 million, NJ taxpayers - 2 million, Insurance - 14 million, and 2 million from B & W rebates (save your coupons).

GPU QUARTERLY REPORT

Following are notes from the report. It is very deviously written and if you'd like a copy ask GPU, 100 Interpace Parkway, Parsippany, NJ 07054, they might send you one. Bill Kuhns, the CEO, in his opening letter says ". . . despite continuing delays in the regulatory process and unfair, self-seeking political opposition at almost every turn", in describing their battle to get TMI #1 on line. For the first 9 months of 1983, GPU reported 45 million dollars in earnings (enough to fuel the decon work of TMI #2 for 6 months - if it had been used properly). From October 1, 1982 to September 30, 1983 - 41 million dollar had been paid to Preferred Shareholders. You realize common stock shareholders have not received dividends since 1979. Once again 41 million would fund at least 6 more months of TMI #2 decon work.



GPU differentiates between "original accident-generated water-waste" and other waste-water that is continually being generated--mainly because the decontamination work is only 25% complete---if that. They try to make it look like things are really getting cleaned up and off the island, however, its a long road. For those who read the quarterly report,deception will be at work. Well so much for integrity. True incompetence comes in the report when Oyster Creek, the other GPU reactor in New Jersey, is discussed. That reactor has been out of service more than a year and now due to "an increased work scope, limited availability of plant parts" and "high summer temperatures in the plant" GPU doesn't expect to get that reactor on line until April 1984. Also 224 spent fuel assemblies stored in West Valley, NY will have to be returned to Oyster Creek by May 31, 1985 (Oyster Creek began operating in 1969). We wonder whether there is room in the storage pools to safely place the spent fuel. We urge you to write for a copy, for you and your legislator. The document is slick, deceptive and reflects a real lack of integrity.

WHY, WHY, WHY???

Just after TMI accident occurred a Special Inquiry Group (SIG) was established by the NRC to review what happened. Harold Hartman, the TMI reactor operator who exposed the falsification of leak rates at TMI #2, was interviewed and gave all the information and it was provided to the SIG on December 3, 1979. The SIG people say it was not included in the official SIG report because there was not enough time or room in the report.

WHAT...? YOU'RE KIDDING!!!

A 3 member Atomic and Safety Licensing Board made a unanimous decision on January 13, 1984; denied a license to Commonwealth Edison, the nations largest nuclear utility. The 3 judge panel said Commonwealth Edison "has a very long record of non-compliances with NRC requirements." Surely if this is the case, how can the NRC allow GPU to operate TMI #1? Well try to remember this famous decision is only the early 3 judge decision---it will more then likely be appealed to the 5 NRC Commissioners and probably result in a 3-2 vote to allow Commonwealth Edison to get the license. So, please, don't raise your eyebrows too far. The public interest intervenors who are battling this case in Illinois will have a longer and costlier battle to wage in the future on this issue.

TMI #1 STEAM TUBES

The NRC staff believes the repaired tubes are not a problem. The method used was not new but never used before in a nuclear reactor. About 29,858 were repaired of the 31,000 tubes that carry hot radioactive water and create steam from the pure water that surrounds them in each of 2 steam generators. Local citizens and public officials have requested hearings on the tubes' safety for this year. The NRC staff said tests showed the leak was only one-sixtieth of the legally permissible amount. GPU allegedly spent \$400,000 to investigate the repair technique before using it and the whole process cost an estimated 60 million dollars. Even though the company had used the technique on 3 million non-nuclear heat exchange tubes since 1966, the point is that radioactivity is involved.

9/15/83 STEAM TUBE MEETING (TMI #1)

A postweld heat treatment of the once through steam generators (2), sensitized the Inconel-600 tube material making it susceptible to intergranular attack "by reduced sulfur species at low temperature." About 1200 tubes were plugged (taken out of service at the same time as the 31,062 were explosively repaired. Allegedly 16,000 total had crack indications. We donot know how many of the 31,062 tubes were plugged prior to the explosive repair work (Nov. 1982 to April 1983). As many as 132 tubes were "repaired" at once through the explosive work. The NRC says some tube defects may have been missed by the inspection of tubes in Nov. and Jan. 1983; however, they believe leak monitoring during a plant cooldown will provide valuable information. It appears GPU has decided that a leak of one-tenth of a gallon a minute will require some administrative action. NRC says 1 gallon a minute leak rate requires the plant be shutdown in 36 hours. The NRC Commissioners couldn't get the necessary three of five votes to make a decision on whether the repairs to TMI #1 steam tubes were potentially hazardous. If three Commissioners agree the repairs could be hazardous, hearings would have to be held.

COMPETENCE AT TMI #1

It appears GPU has failed to adhere to procedures and that there are deficiencies in the procedure review process particularly rel ted to inadvertent releases of Kr-85 during steam tube testing of TMI #1 in August, 1983. Another incident resulted in a health physics technician being counseled and an auxiliary operator suspended for one day for being involved a second time in an improper valve position/positions check.



#### GPU TO RECEIVE WASTE

A Federal Court has ordered that 224 used, but highly radioactive fuel rods will be trucked from West Valley, NY to the Oyster Creek nuclear plant in NJ. The used fuel was sent to NY 10 years ago to be reprocessed but the West Valley Plant was closed. The waste could begin arriving this summer. It will take 32 to 112 truck trips. The shipments will probably travel through PA to South Jersey. The fuel rods are long, thin stainless steel bars containing pellets of uranium fuel. The returned rods will be stored in fuel pools at Oyster Creek. In December 1981, a fuel assembly broke apart while it was being moved in a pool in Minnesota. Evidently the stainless steel corroded in the fuel pool and is evidently a problem for Westinghouse manufactured fuel. There are (were) 234 such assemblies at West Valley, NY. Does anyone know if the Oyster Creek fuel was manufactured by Westinghouse? The longer this fuel sets underwater, the more corroded it becomes, making it more difficult to move at a later date. There were (are) 750 full rods at West Valley. The Phila. Inquirer says between 1980 and 1982, 400,000 curies of radioactivity were "lost" in the U.S. (Remember 43,000 curies of Kr-85 were "lost" in the air around TMI in 1980). The Dept. of Energy said the first permanent dump for highly radioactive waste (fuel rods) will not be chosen until December 1990. It appears the government feels a detailed at-depth testing will be necessary to properly qualify a site, January 1998 is when a permanent underground is to be completed. The states being looked at for high level waste are Washington, Utah, Nevada, Texas, Oklahoma, and Louisiana. By January 1998 the equivalent of 10 football fields each 2 feet deep of spent fuel rods will have accumulated at pools in nuclear power plants.

#### HYDRO

PA has 108 dam sites (potential locations) with a total generating capacity of 625,562 KW or enough to supply 125,000 homes that could be developed. Did you know 13% of the electricity generated in the U.S. is produced by hydro-power? (Nuclear supplies 13%)

#### YOU MUST BE KIDDING?

The December 21, 1983 Philadelphia Inquirer reported Boston Edison's Pilgrim nuclear power plant has some cracked pipes. 10 pipes will be replaced and the job is expected to take 35 weeks and 40 million dollars!!! The cracks resulted from intergranular stress corrosion (the same problem as TMI #1). As a precaution the utility is replacing the pipes with a different type of steel that is not subject to such corrosion. Boston Edison said, "Repairs would only be a temporary solution." Gee, GPU didn't seem to feel that way with Unit 1 and its corrosion problems.

#### YOU'D GET 3¢ ON THE DOLLAR

Representative Bruce Smith of Newberry Township has drafted legislation that would require all PA insurers who write or sell casualty insurance to include coverage for nuclear accidents as a basic clause of the policy. He says, "PA because of its notoriety as the site of the worst commercial accident in history...should be a pioneer in solving problems of living near nuclear plants; unfortunately, PA is still a babe in the woods". His legislation, co-sponsored by others, would amend the state's Insurance Company Law of 1921. Rep. Smith notes that the Price-Anderson Act would cover only 560 million in private property in the event of an accident. He said the market value of property within 25 miles of TMI is 9.6 billion dollars. We feel this legislative proposal will help sensitize the state (or hopefully someone) to inadequacies of nuclear power protections. A PANE tip of the hat to Rep. Smith and the other co-sponsors of the bill.

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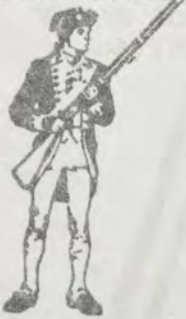
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# PANE

A citizens' public interest organization  
of the Middletown area

THREE MILE ISLAND  
**Clean it.  
Close it.**



# The Patriot

Saturday, January 28, 1984

Volume 143—No. 24

3 Sections — 30 Pages

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## NRC Will Rule by June on TMI-1

EMERGENCY!!! \*\*\* EMERGENCY!!! \*\*\* EMERGENCY!!! \*\*\*  
These headlines should convince you that the time to act is now.

The above Harrisburg Patriot News headline means you and all members of PANE must put on a "full-court press" starting now regarding an expected NRC decision on the future of TMI.

### HOW???

1. Ask neighbors, friends and relatives to write letters and make phone calls to elected public officials.
2. The letters and phone calls should all have one message:  
THE NUCLEAR REGULATORY COMMISSION SHOULD NOT MAKE ANY DECISION ON TMI #1 UNTIL ALL CRIMINAL, CIVIL, AND ADMINISTRATIVE MATTERS ARE RESOLVED. DOES THE SYSTEM WORK? WE NOW HAVE A CRISIS IN DEMOCRACY. EVIDENCE OF THIS IS THE JANUARY 27 NRC VOTE THAT ALLOWS A JUNE NRC DECISION BEFORE A FEDERAL DISTRICT COURT AND OTHER ADMINISTRATIVE INVESTIGATIONS HAVE BEEN COMPLETED.
3. PANE believes the letters and phone calls should be directed to your Congressman in Washington and Senators Heinz and Specter and Governor Thornburgh. If you donot know who your U.S. Congressman is call Governor Thornburgh's toll free hot line 1-800-932-0784 and find out. If you donot live in Pennsylvania, please write to your U.S. Congressman because what is happening here has nation-wide significance.
4. We suggest you send the letter to your Congressman and copies to Specter, Heinz, and Thornburgh. Please follow-up with a phone call to each.

U.S. Congressmen: Dauphin County - George Gekas, Riverside Building #1,  
Front and Maclay Sts., Harrisburg, PA 17110, 232-5123  
York/Cumberland County - Bill Goodling, 2145 Market Street,  
Camp Hill, PA 17011, 763-1988.  
Lancaster County - Robert Walker, Room 1028, Longworth  
Building, Washington, DC 20510.



U.S. Senators: John Heinz, U.S. Senate, Washington, DC 20510, 233-5849 (Hbg.)  
Arlen Specter, U.S. Senate, Washington, DC 20510, 782-3951 Hbg

Governor: Dick Thornburgh, 225 Main Capitol Building, Harrisburg, PA 17120  
787-2500. Governor toll free hot line - 1-800-932-0784.

Lt. Governor: William Scranton, 200 Main Capitol Building, Harrisburg, PA 17120  
787-3300

If you live in Middletown use the copier at the Capitol Campus library for 10¢ a copy to make the necessary copies. This will take your time and money but everyone needs to help-----ask your friends, neighbors, and relatives to help.

# It Wasn't That They Did It, It Was the Way They Did It



## the <sup>12-7-83</sup> FORUM

### The honorable thing to do

**EDITOR:**  
**OUR ENVIRONMENT**  
shapes our attitude, ideas and philosophies toward life. Out there in our environment is Three Mile Island. It is our responsibility through understanding to control our environment, not let it control us.

Dale Carnegie said, "You must first earn the right to speak." We did not ask for a voice in nuclear power; TMI gave it to us. Our conscience will not allow us to be silent. We have earned the right to speak. After 4½ years, why haven't our spoken words been understood and acted upon?

TMI is no longer acceptable for nuclear-power generation. There are too many unanswered questions that need to be resolved; questions concerning the decontamination, defueling and funding of Unit 2, the safety and

reliability of Unit 1, nuclear waste, evacuation, insurance, emissions, health and nuclear accountability.

I am sorry the Nuclear Regulatory Commission has not chosen to treat TMI with the uniqueness it demands. Their agency functions through standards setting and rule making. Citizens will not accept nuclear power if the responsibility and accountability is not accepted by those who promote and produce it. Challenges, like the one we face at TMI, must be met head on.

I do not choose to undermine the laws concerning the existence of nuclear power because of TMI. None of us can change the past. But we can change the future when we take positive corrective action.

We Americans have come to expect and demand leadership that will deliver the kind of country we want for ourselves and our children. The safety and reliability of nuclear power is expected and demanded.

I pray the technology of our times and the morals by which we live successfully come to an understanding.

—Mrs. Linda Braasch,  
Middletown

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THREE MILE ISLAND  
**Clean it.  
Close it.**

APRIL 1984

GOVERNOR THORNBURGH - 1 - 800 - 932-0784

## ANNIVERSARY

PANE held a terrific meeting on March 21 at the MCSO. About 135 people heard Bob Pollard explain the TMI situation in a very easy to understand manner. We then showed a film on the accident. Baked goods were coordinated by Joyce Corradi and Paola Kinney and many, many bakers. We received \$75 in donations and had a wonderful time. On March 27, 1984 many of us gathered at the Forum in Harrisburg to hear Ralph Nader say we need to politicize TMI to shut it down. (Call our Governor at 1-800-932-0784) Gene Stilp put together several fine speakers for the evening and Josh Hooper produced a very beautiful and touching slide-tape program on what we experience, then and now. One PANE family took their 6 year old to the Nader event. Being six means you don't always fully understand what is happening (or maybe you do). This 6 year old living in the shadow of TMI has heard endless conversations about TMI, but never really ever verbalized her feelings or that she really understood. However, during the slide-tape show, several times the words "SHUT TMI" were heard . . . she suddenly turned to her Dad, clapped her hands and said "yeah, shut TMI, then Daddy won't have to go to any meetings anymore--right, Dad?" Mothers and children also went to the stage as a reading was completed on what TMI does to families and how they feel about it.

## TMI VIGIL

Some of us arose at 3 a.m. to drive to the Vigil. It was raining and one PANE member stopped at the local convenience store to get something hot. The counter clerk said she heard there were all kinds of police at TMI and couldn't believe it was 5 years already. We gathered near the North entrance and walked the 1/2 mile with candles in hand quietly listening to a bunch of drunks taunting us from a nearby convenience store parking lot. A short prayer and silence commenced at 4 a.m. and then Jesse Jackson arrived and gave a shutdown speech, like more political people ought to. We walked to our cars, looked back at the ominous flickering towers and hoped this would be the last vigil at TMI. CLEAN IT -- CLOSE IT.

## CONCERNED MOTHERS

These ladies traveled to Washington, DC on April 16 to discuss TMI #2 with Chairman Nunzio Palladino of the NRC. Their 60-minute meeting covered the moral aspects of concentrating on TMI #2 rather than TMI #1, also the fear that if TMI #1 were to start that TMI #2 would not be a priority with GPU. Attending were Betty Chavey, Beth Drazba, Linda Braasch, and Joyce Corradi. Paola Kinney was also slated to appear but influenza kept her out of action on this visit to the cherry blossom capitol.

## MARCH 28, 1984

Jim Hurst, of PANE, and sometimes in pain (see new addition to his home) represented PIRC at a 10 a.m. news conference to ask Governor Thornburgh to commit the Commonwealth to a court challenge if NRC okays a TMI #1 restart in June (call the Governor at 1-800-932-0784). Ellyn Weiss also spoke about the UCS concern over any NRC decision and their desire to pursue such a decision in Federal Court. Norman and Marjorie Aamodt also gave a detailed presentation of incompetence and absence of integrity by the NRC and GPU since and before the accident. Please call the Governor at 1-800-932-0784 and tell his staff that you want TMI cleaned and closed. Also send a letter to Chairman Nunzio Palladino, US NRC, Washington, DC 20555.

## FEBRUARY 28, 1984

As you know this is the date when Met-Ed agreed to plead guilty to one count of criminal misconduct and no contest to six other charges in Federal Court. Four other charges alleging violations of the Atomic Energy Act and a Federal Statute dealing with false statements were dismissed in an agreement between Met-Ed and the Federal Government. If you would like a copy of the facts as gathered by the Federal Government, send \$3 to PANE, P.O. Box 268, Middletown, PA 17057 to cover postage and copying costs. The Federal



attorney charged that the NRC's inquiry into the charges was a "charade." Senator John Heinz said the NRC must now reach convincing conclusions on the management and integrity issues since the Court failed to do this. Remember Met-Ed pleaded not guilty to all charges in November 1983. Part of the settlement, 1 million dollars, will go for emergency planning to the PA Emergency Management Agency. Unfortunately that compensation does not address the fears and concerns of area residents on whether GPU Nuclear should be allowed to operate TMI. The Federal attorney also said the NRC doesn't care what's in the indictment or the outcome. Our problem is that we are deprived of knowing what went on prior to the 1979 accident. As Ellyn Weiss put it, this was all orchestrated and very cleverly conceived. We'd add just like the B&W/GPU trial that ended abruptly after 3 months with an out of court settlement to the tune of 37 million dollars in rebates from B & W to GPU over 10 years -----GPU took B & W to court for 4 billion, but the settlement occurred in January 1983 when the courtroom antics became too embarrassing for the nuclear industry and GPU. An aside to the one court guilty plea is that now Met-Ed employees who were part of the original grand jury probe have asked the Federal Court not to release the record to the NRC. The employees claim it will reveal identities and testimony. Barton S. Gephart of Harrisburg is representing the employees. Evidently there is something to hide or is harassment still part of the game at TMI, since the Parks affair?

#### JCP&L SHAME ON YOU

The New Jersey Public Utility Commission says this 25% owner of TMI should be penalized for the accident and it may add up to 280 million to be refunded to its customers. Meanwhile because of the unreliability of Oyster Creek and cancellation of Forked River Nuclear Plant, PP&L will sell 945 megawatts to JCP&L thru 1995 and decreasing thru 1999. The fine for the guilty pleas of one criminal charge and no contest to the other 6 was \$45,000. CALL THE GOVERNOR 1-800-932-0784 1-800-932-0784 CALL THE GOVERNOR, PLEASE

#### TMI #1

NRC Commissioners Roberts, Palladino, and Bernthal voted on January 27, 1984 that a decision should be made on the future of TMI #1, in June 1984. Commissioners Asselstine and Gilinsky opposed. It is very likely that questions of competence and integrity of the plants' management will not be resolved by June. GPU says it is "high time" the NRC decide; GPU says only 1 of 63 items the NRC says are unresolved remain so, that is the investigation of leak rates at TMI #1. Meanwhile on March 20, 1984 GPU said workers were repairing a cracked shaft in a reactor coolant pump (one of 4) that sends liquid over the hot radioactive core. GPU says the pump developed vibration trouble in January. The NRC on April 11, 1984 gave GPU permission to begin non-nuclear testing of TMI #1 on May 15. The testing would bring it up to normal operating temperature of 600 degrees. The NRC has still not ruled on whether the method used to fix 31,000 damaged steam tubes has led to possible safety hazards which could lead to further hearings. Norman Aamodt and Jane Lee have filed a response to the NRC that the TMI #1 steam generator tubes and others have an operational history that is expected to create more of the kinds of stresses and cracking that caused a need for repairs originally. They say there is an enormous gap of knowledge of the actual role played by various substances in causing tube problems in reactors like TMI #1. They argue no decision should be made on TMI #1 steam generator tube repairs until an industry consensus can be developed on whether the original problem at TMI #1 has been solved and that it is unlikely to occur again. Meanwhile, the NRC is considering a plan to reduce the evacuation area around a plant from 10 miles to two. The Lancaster based SVA has been asking their county commissioners to expand the area from 10 miles to 25 miles. The new plan would have those living within two miles to be evacuated and the 2 to 10 mile residents would be sheltered in their homes or other buildings. Lancaster County has 21,200 residents within 10 miles of TMI. SVA has said children should only be bussed to one evacuation center in each school district so parents in one family don't have to go to different locations for several children; also pamphlets on evacuation need to be printed for Spanish and Vietnamese residents and a plan needs to be developed for the Elizabethtown Hospital for Children and Youth. SVA also says contingencies should be drawn up if bus drivers don't show up and children experience mental trauma. Eric Epstein of the SVA also noted that Lancaster County had 15 deficiencies in a TMI drill held in Nov. 1983. A county commissioner responded that the problems were not with the plan but rather "people problems". So, the plan is perfect but people as we all know can and will be different especially if they have to experience another accident or even the threat of such a problem. Meanwhile, Norman and Marjorie Aamodt of Chester County, Jeremiah Fisher of Etters, and Paul Lytle of Middletown contend that PA plans are inadequate for farmers and livestock. There are approximately 13,000 farmers in a 4 county area surrounding TMI. Farmers are advised to go to distribution centers during an accident to pick



up radiation detection devices and then receive a pass to get back to their farms.

#### TMI #2

As of January 1984, 75% of the funding needed (760 million) had been committed for cleanup. Of course we believe the actual cost will go to 1.5 billion or more when this job is completed in about 25 years (our opinion). Pledges now total 581 million. Some scientists have estimated 7 to 21 employees will die from radiation received during cleanup and 14 to 42 will develop some kind of cancer. The NRC originally said one worker would die and now they say 2 to 6. GPU said they originally wanted to spend 130 - 140 million on cleanup in 1984 but will have to settle for the 75 million now available. The core of TMI #2, if ever removed, will be sent to Idaho the NRC says in 1986 and will cost 7.3 million to remove, store and dispose of. The national nuclear industry has pledged 78 million for the cleanup but not one penny can be used until pledges reach 100 million. GPU says funding is in hand for 1984 and 1985. On April 11, 1984 the Public Service Commission of New York State rejected a request by 5 state utilities that they be allowed to send 7 million dollars of customer money to help clean up TMI #2. GPU says before the accident the core's total heat output was 2.5 million, it is now about 17 kilowatts. The report that resulted from the Richard Parks et al complaints, prepared by the NRC was evidently "doctored" by TMI Project Director Bernie Snyder and other NRC staff persons. The report was initially completed by the NRC Office of Investigations (OI). OI said atomic safety regulations were routinely violated by Bechtel and GPU. OI also said NRC-TMI staff had contributed to the violations by approving procedures informally that did not meet requirements. The NRC changed the original report by minimizing the importance of OI findings. OI warned that more problems will occur unless the NRC-TMI office adopts more formal regulatory methods. Meanwhile on April 11, 1984, a former worker at TMI, William Pensyl, said contamination has become a way of life for TMI workers. In August of 1982, he refused to perform work without a respirator because he was afraid of breathing contamination shaken from clothing of personnel who had completed work inside of Unit 2. He had previously worn the respirator but the rules were changed and he was discharged.

Governor Thornburgh 1-800-932-0784

#### TMI 2 DECON/DEFUEL

In 1981 the NRC felt less than one cancer death would occur to workers doing the TMI #2 work. Now new NRC studies say 2 - 6 could die. Tom Cochran a physicist with the National Resources Defense Council says 10 to 50 cancer cases, not all fatal, will occur and 50 children of workers will have genetic defects. He said the major risk is thyroid cancer which usually does not result in death. The state of PA will be asking the NRC to evaluate the prospect of sealing TMI #2 after the fuel is removed. Interestingly the draft NRC document with new figures on the TMI #2 work lists a new alternative that would require 15 - 20 years of baby-sitting after the fuel is removed and then eventual complete decontamination by utilizing robotics. A forerunner robot developed by Carnegie-Mellon University will soon be used to begin cleaning the "hot" highly contaminated basement of TMI #2. Radiation averages 5 to 1,000 rems an hour. The robot will cost close to \$500,000 and will be first used this summer. The NRC says GPU has been accused of 6 procedural control violations mostly resulting from the Polar Crane incident. The NRC Office of Investigations concluded in September 1983 that safety shortcut allegations were correct. On February 3, Bernie Synder of NRC said the violations were less serious. In some cases, Bechtel Northern Corp. followed its own course rather than NRC/GPU regulations. Reagan's 1984-85 federal budget calls for 32 million to be used for TMI #2 research and development with less than half toward actual cleanup costs.

#### WE'RE CONFUSED

The February 9, 1984 Harrisburg Patriot News had an AP article which said county and local agencies responded well in the November 1983 test of preparedness related to TMI #1. Yet the February 9, 1984 Philadelphia Inquirer said the response to the drill was criticized. The Philadelphia article was very critical and informative. Thank goodness for decent and fair reporting of the real issues rather than cover ups.

#### UNIT 1 LET IT RUN?????

Robert Pollard a nuclear safety engineer with The Union of Concerned Scientists says the big question is can it operate safely? The Union of Concerned Scientists, a nonprofit coalition composed of engineers, scientists and other professionals, may take the NRC to court because they (NRC) are presently violating their mandate to ensure the safety of the public. Many of the needed modifications would not be made until the first refueling if TMI #1



were to ever operate. Pollard points out the NRC in 1979 wanted to see reasonable progress toward completing many of these modifications. He feels now 5 years later, GPU has had plenty of time to make the changes, that's not reasonable progress. He also feels the management and design questions cannot be separated as proposed by NRC. Mr. Pollard also notes our own PA Dept. of Environmental Resources may be one of the primary hurdles in achieving a safe plant because they have dropped their insistence on several safety standards.

### 63 ISSUES AND TMI #1

These are issues related to potential management integrity concerns. There may be more or less and they are all listed in 3 groupings: Group 1 - 21 items raised in 1980 - 81 TMI #1 hearings. Group 2 - 16 items raised in 1979 and 1981 reactor operator test cheating incidents and Group 3 - those raised since 1981, (26 items). If you want a complete list write to Chairman Nunzio Palladino, U.S. NRC, Washington, DC 20555. The 63 were released on January 21, 1984. On February 23, 1984, GPU released a statement saying only 2 had not been resolved. These relate to falsifications of reactor coolant leak rates at TMI #1 and #2, GPU says the TMI #1 allegations are only relevant. The falsifications will be explored in a federal district court trial to be held this year. GPU wants to influence public opinion before the trial so they have commissioned a private investigator from New Jersey (home of Jersey Central Power and Light) to conduct a probe. Interestingly the NRC has decided not to pursue their investigation until after the trial.

### UCS, THE AAMODT'S AND TMIA

These public interest intervenors believe GPU has not substantially improved its plant maintenance, operator training practices, nor replaced key personnel. They say Daniel Shoulin who now manages TMI #1 maintenance is the same person who ran a faulty maintenance program before the accident. Also Robert Long and Robert Knief have received promotions and in charge of operator training and testing even though wide spread cheating occurred while they held similar positions.

### THE BIG QUESTION??

Among the 60 to 80 questions about GPU integrity and competence, one of the bigger ones is, "did Met-Ed (now GPU nuclear) withhold information during the accident? or are they just incompetent?"

### FAMOUS QUOTES

February 23, 1984 - Director of NRC's Office of Inspection and Enforcement - "This utility (GPU) has a reputation of being slower than we would hope"  
February 23, 1984 - Senator H. John Heinz compared GPU to a navy skipper who runs a ship aground but gets another ship before the court martial.

### STEAM TUBES AND TMI #1

As you know they were supposedly repaired. If TMI #1 were to ever operate and the repair failed then GPU would have to request permission to replace the steam generators (costing 200 to 300 million dollars - 1/3 the cost of cleaning TMI #2). The Palmetto Alliance in South Carolina is faced with such a situation now in one of their state's reactors. Palmetto has petitioned NRC to examine expensive repairs vs. permanent shutdown. With reactors nationwide aging and performing poorly, the Palmetto petition may be the boilerplate for the future.

MORE CHEATING????!!! - An individual (Thomas Quinn) had taken 2 psychological screening examinations given to him by a personnel recruiting firm for GPU. According to a statement by GPU attorney Blake, Quinn did not pay the personnel fee so the personnel co. sued Quinn. Quinn then sued the personnel co. for breach of privacy. Quinn supposedly was given answers to the second exam based on answers he had completed on the first exam, given by the personnel co. If you're confused, so are we.

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# P.A.N.E.

July/August 1984

## The Reality

As we go to press the NRC will have held an August 15 meeting in D.C. with Governor Thornburgh and the public interest intervenors regarding TMI #1. It will be interesting to see what the Governor says. After that meeting the NRC will have to decide on the fate of TMI #1. When the NRC votes to start TMI #1 it will be our hope that the courts of this country will help us close TMI. Hopefully the Commonwealth will be helping in this endeavor. It appears the administrative processes of the NRC will not be sensitive to our concerns. The battle will have to go to the Judicial System when the NRC processes fail us. YOU hang in there, because PANE WILL.

## TMI #1

As we go to press there has not been a decision on TMI #1. However the NRC staff on July 26, 1984 said that even though former top managers had been involved in cheating, lying, and falsifying records current management has integrity. They said GPU chairman William Kuhns must shoulder some responsibility for improper activities. The report said GPU President Herm Dieckamp failed through 1981 in his responsibilities overseeing the operator of TMI. The NRC staff report also said Robert Arnold, GPU Nuclear President, had been involved in cheating. Also TMI 2 employees had falsified safety records in the months leading up to the March 28, 1979 accident. Also Richard Parks was harassed by top plant officials in 1983 and GPU executives had engaged in improper activities. Also, Arnold made inaccurate, incomplete and questionable statements to the NRC in 1979 about the TMI #2 accident. Also pre-Unit 2 accident training programs were caused by either poor attitude or careless disregard of responsibilities. Post-accident operator cheating on license tests also raises questions about managements attitude and performance. Also Met-Ed may have given inaccurate and incomplete information to the NRC in response to NRC violation notices.

PANE believes there is now more evidence then ever before that GPU's license should be revoked. A hopeful sign is a June 14 letter from Governor Thornburgh to NRC's Palladino said he requests an opportunity to appear before them before a decision is made on Unit 1. As we go to press he is slated to appear on August 15 before the NRC in Washington, DC. We believe that meeting should have been held in Harrisburg.

# Mondale says TMI should be closed forever

## Steam Tube Stuff

PANE can be proud of its member turnout at the limited appearances during these hearings held at Capitol Campus on July 16 and July 17. Nive PANE members, other area residents and members of anti-TMI organizations made comments about the need for the NRC Atomic Safety and Licensing Board to very seriously consider whether the TMI #1 repairs are adequate. Louise Bradford of TMIA represented all of us in actual hearings against GPU and NRC staff. She raised questions about technical aspects of operating TMI #1. Thanks to TMIA and Louise for their efforts; also the TMI Legal Fund which PANE supports has provided monetary assistance to legal interventions and will continue in the future. TMIA and Louise assert the damaged tubes should have been replaced not repaired and that TMI #1 not being in use for so long represented a danger to the public if restarted. PANE's John Kovalic was quoted in a July 17, 1984 edition of the Patriot attacking the repair process. Meanwhile on June 23 GPU detected some leakage 15 tubes of TMI #1 (31,000 were repaired and 1,204 of the total were taken out of service). If the plant is operating and tubes leak a release of radioactive water or steam could go to the environment or the reactor could overheat dangerously. Tony Fasano of NRC said the leaks may have occurred where cracks had been repaired in 1982 and 1983. The steam tube repairs of 1982 and 1983 cost 45 million dollars to complete.

## Falsification

The June 16, 1984 Patriot reported evidence that a TMI worker filed a report on air emissions in and around TMI for Sunday, July 24, 1983 although he was not at the plant that day. The employee has resigned but the point is clear that integrity may well be lacking top to bottom at TMI.



### Another Cheating Incident

James Floyd, a GPU employee, left TMI in April 1983 and has been indicted by Federal authorities for alleged criminal misconduct regarding cheating on operator exams. He had been a 20-year employee of Met-Ed and GPU. He is now employed by Energy Inc. in Idaho Falls, Idaho and pleaded innocent to the charges with a trial forthcoming.

### Zech

Retired Vice Admiral Lando W. Zech, Jr. has replaced Victor Gilinsky as the 5th NRC Commissioner. He was appointed by President Reagan during a Congressional recess in July and thereby avoids Senate hearings and confirmation until the end of 1985. Reagan once again reveals his disdain for public concerns about the adequacy of nuclear power by "sneaking" this nuclear submarine commander into the NRC. Our Senator Specter and Heinz should have had the opportunity to "grill" Zech but now a TMI #1 vote will occur soon, with an unknown in Gilinsky's seat.

### Evacuation

PANE has a May 17, 1984 letter from NRC to Ellyn Weiss of UCS about deficiencies in the November 16, 1983 exercise conducted at TMI. Meanwhile on July 17 a private firm headed by Oran Henderson (former head of PEMA) tested the Nov. 16, 1983 deficiencies in tests in Dauphin and Lancaster County and said all shortcomings have been corrected even though they never told the NRC about the tests. The tests required prompt notification of all municipalities at risk. Now the former PEMA head says FEMA (the federal government agency) must say his review was adequate and then the NRC staff must certify the TMI plan again. FEMA in February 1984 said there were 5 major deficiencies and 100 minor ones. NRC's Edward Jordan said on June 27, 1984 that a partial emergency drill would have to be conducted and we wonder whether the July 17, 1984 drill was it. Interesting note in Dauphin County only 4 workers showed up for the 1983 exercise according to Mick Rood (June 28, 1984 Patriot). Meanwhile that July 17 GPU drill that Henderson's private firm reviewed upset the NRC's Phil Grant, site deputy director. He said "initially we weren't notified (the NRC)." Grant said he admonished GPU and they apologized and agreed to inform the NRC of any future tests. This whole episode is upsetting to us at PANE; it shows deceitful practices and obviously a less than serious attitude towards emergency notification by GPU. We call it lack of integrity and we just wanted you to know. P.S. 85% of the population of Harrisburg is still not included in the GPU emergency evacuation plan. (If you would like information discussed earlier send \$1.50 to PANE to cover copying and postage.)

Newsletter typed August 11, 1984

### TMI #2 Headlift

For months the date was August 8, 1984, some people planned their vacations-- others were scheduling 2 or 3 day trips away from the area. Try to remember that GPU is not trusted by this community no matter what the assurances are and from who. Then on July 19 GPU said July 24 would be the date. The headlift was to take no more than 48 hours and no venting would occur until it was over. Radiation readings would be 500 and 600 rems per hour in the area of the head when the plenum is exposed (normal reactors emit 1 to 2 rems per hour). Workers are expected to get 250 to 300 millirems per hour. A plenum misting system was to be used to spray water on the plenum top if it begins to dry out after the head is lifted to prevent contamination from being airborne. The whole operation was to begin on July 24, 1984 at 9:30 a.m. but instead began at 10 p.m. Even after a year of preparation things weren't going on schedule. The head is 25 feet high and 17 feet wide and weighs as much as a locomotive. Technicians needed more time to adjust rigging on the POLAR CRANE and adjust chemical makeup of a water system. A zoom lens on one of 8 cameras also malfunctioned. Also power supplies to the cameras and 13 radiation monitors around the reactor vessel did not work immediately. During the initial moving of the head 2 remote video cameras mounted on the reactor head were severed accidentally but Doub Bedell said 2 other cameras in use would be satisfactory rather than the 4. Meanwhile once the head was hoisted it could not be moved onto a stand and dangled 21 inches above the stand for 12 hours because guide pins could not be lined up so workers built a 12 ft. high wood scaffold and used a crowbar, cables, and winch to place the head. After the head was finally lowered the POLAR CRANE used for the job lost power, so technicians had to make repairs. As a result the reactor vessel was uncovered for many hours longer than had been planned. As a result of the fowl-ups, venting had to be conducted before the work was completed. Meanwhile, radiation that was expected to increase at the reactor base by 10 times actually went up 35 times (3,000 to 3,500 millirems) but GPU said "don't worry". Because of the crane power failure, crews had to uncouple the rigging on the head by hand to ready the crane for work involved to move a steel cylinder over the exposed reactor



head. Finally power was restored to the POLAR CRANE and on July 26, 1984 the steel cylinder was being lowered when at 4:40 p.m. within one inch of success, power once again was lost from the POLAR CRANE and the cylinder dangled. So workers manually loosened turn-buckles mounted on the CRANE's three cables and the 16½ ton steel cover plate was completely lowered. The operation ended at 12:02 a.m. on July 27, 1984 and took about 50 hours. GPU said maximum worker exposure was less than 600 millirems and the average range for one entry was 50 to 350 millirems. The headlift operation cost 15 million dollars. GPU says 200 people were involved and the Unit 2 workforce totals 750 persons. The next step is removal of the 55 ton cylinder called the plenum. It is used to guide the control rods and press down on fuel assemblies to maintain proper alignment. GPU wants to jack the plenum several inches in December to see whether it is distorted. Below the plenum is the fuel core (2 million cubic inches of fuel pellets). The plenum is now optimistically scheduled for removal in April 1985 and actual fuel removal in July 1985 to be completed in 1988. A special "good job" is extended to E.O. Brewster of the Press and Journal writer whose article (8/1/84) we utilized to write some of this summary.

Meanwhile - "iron-clad assurances" that utilities will supply monies for the entire clean-up as promised by EEI remain elusive. EEI says power companies of PA may have to shoulder more of the contributions (as reported in the last PANE PILL). EPA plans to cut lab analysis by 50% and Tom Gerusky of DER says the new plan as proposed by EPA will provide more information about low levels of radioactivity. PANE responded to the plan in an August 5, 1984 letter to EPA. Meanwhile - GPU says it will not be able to propose the ultimate fate of Unit #2 until 1988 or 1989. (Ho! Ho! We know what to do) Although they say temporary storage would be the cheapest and is attractive. We'd (PANE) like to see it decommissioned as soon as possible. P.S. EEI has asked 44 utilities to confirm their original pledges by August 15. (Most of the above was gathered from the Lancaster Intelligencer which has regularly done a far superior job than the Harrisburg papers for the past 5 years.)

Worker's Mother Sues

A TMI #2 worker died on July 22, 1982 of Leukemia and his mother has filed suit against GPU in Federal Middle District Court for at least \$10,000 in damages. The deceased's mother said other workers were unable to remove her son from a contaminated area when equipment malfunctioned. He was immediately admitted to a hospital and within 3 months (January 1980) was diagnosed as having acute myelogenous leukemia. A Hershey Medical Center physician told the parents that the death was a 50-50 chance of being radiation related.

Larry King

This TMI #2 engineer has filed a federal court suit seeking damages for his wrongful firing. King was one of the original employees who questioned shortcuts being taken in the repair of the POLAR CRANE. He says GPU conspired to ruin his professional standing and will not release his work records to prospective employers.

TMI 9

May 18, 1983 marked one year since the residents of Dauphin County (home of TMI) voted in a referendum 3 to 1 that TMI #1 should be closed. 9 citizens faced a Dauphin County jury on August 6, 1984 in Dauphin County Court utilizing their testimony and that of physicist Michio Kaku and epidemiologist Dr. Carl Johnson that their blocking of the TMI gates on May 18, 1983 was because they feared imminent harm from a TMI #1 restart. The 9 were found guilty by the jury and Judge John Dowling fined them \$10 instead of \$2,500 and one yr. in

Blondie



# Pre-accident refusal to shut TMI claimed



jail. One juror said "Speaking for all of us now, we all felt they were fighting for a good reason. We had sympathy for all of them." The defense attorney was Joseph Huss and our hats off to him and the TMI 9 for their efforts.

#### Special Thanks

The extremely well done ad in the June 27, 1984 Middletown Press and Journal for PANE was produced by three residents of New York City. Bev Hess of Susquehanna Valley Alliance and Linda Lotz of TMIA did the coordinating for the work. The three NYC persons who contributed their talents are David M. Johnson, Vice President and Creative Supervisor of Batten, Barton, Durstine and Osborn, Inc. and his wife Jill Bell. David has been in advertising work for 14 years and Jill is a former Fulbright scholar and attended London Art School. Brad Holland did the art work. He works primarily for publications and produced a cover for Newsweek in June. We thank all three for their creative talent and art work.

#### Tidbits

Well done to Harrisburg Patriot Sunday News of August 12, 1984 and its editorial on TMI. Saul Kohler former executive editor now works for Bell Telephone. So we assume Henry H. Young the new one is responsible for the excellent piece. Elaine Huber of Landisville has been researching the history of Three Mile Island and says that without even mentioning the accident the long history of the island and its ownership is filled with misfortune most of it from greed. (July 18, 1984 N.W. Edition of Lancaster Intelligencer). USA TODAY July 5, 1984 edition said for July and August the USA has 26.4% more capacity to generate electricity than is needed in peak demand. PANE has a copy of an article on the B & W vs. GPU trial from The American Lawyer - April 1983. Real good reading, send PANE \$1.50 to cover postage and copying. Also, Dean Witter has a research note--Utility Group published May 30, 1984--RI, 1284/04-45 that discussed electric utility bankruptcy's and specifically TMI stuff. Bob Manik brought it to our attention. Call your Dean Witter local office for a copy, "A Primer on Bankruptcy." Philadelphia Electric (PE) has started a pro-nuclear newspaper for its Limerick plant neighbors. The person in charge is formerly editorial page editor of the Phila. Bulletin (We believe Doug Bedell of GPU also worked there). A recent PE drill required 5 writers for the Limerick Light to write articles. One of them told the Inquirer that he was paid \$200 by PE to write a 600 word article on the drill. Mexico will raze 109 houses built with that radioactive steel, some of which reached the U.S. last year and early this year from a diagnostic cancer treatment machine that was disposed of and contained cobalt 60. Pennsylvania and West Virginia have signed a pact to form their own low level waste dump. It is anticipated that W. Virginia will ship its low level waste to PA. A disposal site has not been chosen yet but some studies have said the northern tier of the state would be best. Federal law says by January 1, 1986 PA must have its own disposal site and the present accepters of PA waste would not have to accept our stuff. Low level waste is rags, paper, clothing from nuclear power plants, hospitals, and industry. Radiation can be emitted from 60 hours to 300 years depending on the material. 55 gallon steel drums or crates is what the material is packaged in and buried. Bill Jordan has supplied us with a copy of his article in the Dickinson Law Review, Vol. 88, Fall 1983, No. 1 about state and local government authority to bar or regulate reactors to protect psychological health. Send \$3 to PANE to cover postage and copying. A copy of the June 27, 1984 PANE ad in the Press and Journal can be yours for 50¢ to cover postage and handling. We've been reviewing documents from 1980 that show GPU asking for all kinds of exceptions to completing hardware items at TMI #1. Hopefully we'll get time to see if any of them after 4 years have been completed or are still exceptions.

PANE  
P.O. BOX 268  
MIDDLETOWN, PA 17057

BULK RATE  
U.S. POSTAGE  
PAID  
MIDDLETOWN, PA 17057  
PERMIT NO. 43



# PANE

A citizens' public interest organization  
of the Middletown area

THREE MILE ISLAND  
**Clean it.  
Close it.**

SEPTEMBER 1984

PANE BOARD MEETING - October 14 & November 11 - 7 to 9 p.m. Frey Village  
Guest House, N. Union Street - all members invited.

September 8, 1984

As you know the NRC made a decision on September 7 to delay restart (notice we didn't say restart vote) until after the Presidential election, most likely sometime between January and June 1985. September 8 is when we checked the news coverage. Lancaster Intelligencer - Page 1, excellent article, Phila. Inquirer - Page 1, excellent article, Harrisburg Patriot - Second section, page 1 very good article. Once again the Patriot must assume people don't want to read about TMI----the people who have the most to gain or lose from an NRC decision need to know and the Patriot should be more responsible!!

The Reality....

....is that the NRC will eventually allow TMI #1 to restart, whether it will actually happen depends on 4 items 1. How well GPU can conduct its operations at TMI #1, #2 and Oyster Creek between now the NRC decision to restart 2. How well public interest intervenors like the Aamodts, UCS and TMIA can place information in the NRC record and raise desperately needed finances to do this. 3. Whether "ourside" will have the money and competent people to take the NRC decision, to allow restart, to the courts with the information that's been compiled in "the record" discussed in #2 and 4. how well our Governor follows the issue (unless he suddenly leaves the Governorship.) PANE suggests you send a monetary contribution to the Three Mile Island Legal Fund ( a coalition of area organizations like PANE and Susquehanna Valley Alliance that dispenses legal expenses to intervenors.) 1037 Maclay Street, Harrisburg, PA 17103, then volunteer your time to another umbrella organization that PANE participates in the Three Mile Island Public Interest Resource Center, 1037 Maclay St., Harrisburg, PA 17103, telephone 717-233-4241, if no answer, leave a message on the machine.

September 7, 1984

We'll summarize the 4 to 1 (Asselstine the lone no vote) NRC Commissioner vote for you. It appears the Presidential elections and Governor Thornburgh's August 15 visit to the NRC has staved off a restart vote, temporarily. The decision says hearings on three issues will begin 1) whether TMI's training program for reactor operators is adequate 2) Whether Herm "you can move if you want to" Dieckamp and other GPU people did not tell truth about what occurred when the 1979 accident began and 3) whether leak rates were falsified at TMI #1 in 1978 and 1979. An NRC appeal board had originally ordered that these three hearings occur, GPU opposed it as did the NRC staff. What's puzzling about all of this allegedly "good news" is that the NRC Commissioners over the next 90 to 150 days will personally review the previously mentioned appeals board decision. After their personal perusal, the commissioners will then vote on whether to await completion of the three hearings, on whether additional hearings on management integrity are necessary or vote on low power operation even though the above hearing aren't finished. We suspect Zech, Roberts, Palladino and perhaps Bernthal want to start the reactor as soon as possible after January 1. Meanwhile TMI Alert will soon begin NRC hearings to a three judge NRC panel on the extent of falsification of TMI #2 leak rates, certainly a big job to complete particularly since federal grand jury information cannot be released. Mick Rood reported in the Patriot that Ellyn Weiss of UCS is concerned about the NRC Commissioners personal review of the above mentioned appeals board decision because it will not allow trial-like cross examination of witnesses to help the commissioners develop a better understanding of events Rood also said Commissioner Asselstine voted against the order ". . . because he (Asselstine) felt hearings should be re-opened on restart issues. Pennsylvania Governor Dick Thornburgh had been absolutely right when he asked the NRC for that last month." Well basically it comes down to the need for money and citizen time to battle GPU and NRC. It appears NRC is willing to continue their "charade of justice" hoping to appease our Governor and get Reagan re-elected.



Tell the governor to remain vigilant---1-800-932-0784, you don't have to give your name and address if you choose not, just give the county you live in. CALL HIM TODAY.

### THE GOVERNOR

Our last newsletter indicated our concern for what Thornburgh would say on August 15. We believe it was a gutsy speech but merely laid out the groundwork for the NRC to complete all "merit" items, meaning more hearings that already oppress volunteer intervenors and cause us to fund-raise to get the bucks together for legal assistance and other support. We'll summarize for you what he said on August 15, 1984----Hang on to this and check it out when it's time to "Jump a Hoop" again like we did on August 15. This could be the basis for a letter to Thornburgh when the next "hoop Jumping exercise" is scheduled and provide benchmarks or milestones to evaluate his and the NRC's progress:

1. Operator training, fully and properly evaluated to meet the highest standards prior to restart.
2. Emergency management system properly tested and certified prior to restart.
3. Conduct open hearings on whether the act that led to criminal indictment was directed or condoned by any members of current management of TMI #1 (We believe it should include anyone at TMI)
4. Evaluate alleged willful misstatements in the Keaten Report (GPU Internal document about the accident)
5. Deliberations on some operator training improvements and steam generator repairs have been completed.
6. Funding for TMI #2 (vague, remember clean-up will probably go more than the 1 billion dollars unless they babysit, if they ever get the fuel out)
7. All major safety issues resolved (vague)

Thornburgh said he believes the situation must be resolved on its merits, which means hearing records. That translates into more energy and money from you and me to the Three Mile Island Legal Fund to keep the cases going. One final note--the Governor referred to the 1979 TMI #1 shutdown order. He said it discussed the fact that "management capability and resources should be available related to TMI #2." We believe that is one opening that integrity and character can be brought to bear and say "We'll trust them to clean it up (sorta) but not to operate TMI #1 at the same time. The Governor delayed a restart decision, but it's coming and we're not sure he'll be around but you can count on PANE and the TMI Legal Fund.

### Fred Williams

This radio talk show has many discussions on TMI and nuclear power, tune him in Monday through Friday 10 a.m. - 2 p.m., WVLV 960 on the AM dial.

### RADIATION STUDY

The Three Mile Island Public Health Fund asked Dr. Jan Beyea of the National Audubon Society to conduct a critical study of public literature on TMI dose assessments. (A review of Dose Assessments at TMI and recommendations for future research) The results of his study make it clear further work needs to be completed and he makes several excellent proposals. We are giving you a chance to make some observations about how the study was handled by local newspapers. We have enclosed the articles from the Beyea news conference that appeared in Harrisburg and Lancaster papers. We also had a PANE person read and summarize the document (2½ hours of reading). We'll let you decide whether the news media got the essence of the study as our PANE reader saw it. The Study is available from TMI Public Health Fund, 1622 Locust St., Philadelphia, PA 19103 (215-875-3026)

Dr. Beyea states in the preface that significant issues do remain unresolved--issues that might bear on the ultimate health effects projected to occur as a result of the accident. The issues remain unresolved not because investigators were incompetent but because a great deal of crucial data does not exist or is unreliable. Following is a summary of items outlined in his report.

1. Some assumptions used to estimate the release of radioactive noble gasses relied solely on monitors in the TMI #2 Auxiliary Building, out of the direct path of escaping radioactivity, because the vent stack monitor went off-scale.
2. Met-Ed devices used to measure radiation (TLD's) left significant angular gaps through which radioactivity could have passed, partially or wholly undetected. A set of NRC TLD's showed a greater population dose than Met-Eds when compared.
3. The bulk of DOE helicopter readings donot begin until 2 days after the accident.



4. Estimates of the amount of radioiodine released was 15 - 30 curies but one analysis says it could be 5100 to 64,000 curies.
  5. In-plant measurements of released radioiodine show gaps in the monitoring data due to the loss of filter cartridges. 11 million curies of radio-iodine has not been traced.
  6. Related to radiocesium sampling, many readings from different sites show or are recorded to show exactly the same value making these readings suspect.
  7. Environmental sampling did not cover all directions from TMI accurately.
  8. Official studies easily accept monitor readings that may be open to question and reject a number of high readings without sufficient rationale.
  9. Monitoring equipment at TMI was poor and liable to error.
  10. Some data (radioiodine grass measurements) have yet to be officially analyzed.
  11. Official estimates for whole-body and thyroid population doses should not be regarded as final at this time.
  12. The collective dose for noble gasses when translated into cancer deaths could be 3.78 to 12.6 based on the lowest and highest data available at this time.
  13. Noble gas released estimates are from 2.4 to 10 million curies (about 1 curie of Krypton 85, a noble gas, is released from TMI #2 each day).
  14. The amount of radioiodine released from the vent stack for the first 15 hours of the accident is not known because the monitoring cartridges were lost or mislabeled. Further investigation reveals the raw data is suspect out to 42 hours from the start of the accident.
  15. In 1982 it was discovered a by-pass existed around the filters between the containment building and vent stack, discussed in 14 above. Steel plugs that were supposed to block interconnecting drain pipes were missing. In 1980 the holes were covered with "tuck tape" to prepare for the venting, but evidently there wasn't even tape in place at the time of the accident.
  16. There may be other unmonitored release pathways.
  17. Radioiodine found in a large sample of cows' milk is far too high to be consistent with official release estimates.
  18. Some grass measurements conducted by Dept. of Energy for radioiodine are so uniform as to suggest incorrect labeling.
  19. Grass and milk measurements were not taken uniformly in all angular sectors.
  20. Since the NRC recently increased their estimates of projected occupational dose by a factor of 6 it is probable that population dose estimates should be reviewed.
  21. Met-Eds consultants, at the time of the accident, Woodard and Potter did not include all TLD's in computing a total release of noble gasses.
  22. The DOE helicopter readings may have missed the center of the plume and did not measure vertical distribution of radioactivity in the plume.
  23. There were no NRC TLD's in place before March 31 (accident occurred 4 a.m., March 28).
  24. Information that was used for official estimates that came from Met-Ed TLD's is suspect.
  25. Five known discharges into the river were not sampled for radioactivity, including one from the start of the accident at 4 a.m. until 9 a.m., although a radiation alarm did not go off, assuming it was working, it can be assumed the releases were small.
  26. Iodine release data for the first 15 hours of the accident is missing.
  27. 760 people had "whole body counts" conducted beginning on April 10, 1979, the Kemeny Commission staff did not think highly of the procedures followed and tended to discount the measurements.
  28. A prediction of the amount of radioiodine per gram of grass is about 4 times higher than a measurement made by Met-Ed at a location nearby (midway between two vole sites).
  29. W.P. Kirk local EPA person is noted for a sarcastic letter of criticism of a vole experiment on pg. C48 of the document.
  30. An appendix discussed the practice of leaving reactor building doors open during personnel entries. It appears both doors of one airlock are kept open during building entries to expedite worker egress. The potential for releases is even more significant if the equipment hatch remains open for certain operations. See pages F-5 and F-6, of the Beyea report.
  31. Between 56 and 183 fuel cask shipments will be needed to remove fuel and fuel debris. FANE wonders if the casks are built??
- In summary the report says best efforts have not been made yet to determine if high readings have been rejected justifiably and if informed criticisms have been given a response. Dr. Beyea recognizes TMI area residents have been waiting 5 years for information they can trust. At the time of the accident most investigators did the best they could in spite of gaps in the available data. Regarding TLD data, Beyea asserts, "there is enough justification to make a plausible case for throwing all the data out for one reason or another." Studies of the releases at their source rely on monitors far from



the escaping radioactivity. Studies done from environmental monitoring are flawed because of angular gaps in TMI coverage not corrected until 3 days after the accident. Beyea says "Data at TMI is so sparse that none of it should be ignored unless there is convincing evidence that it is completely useless. Now that you have information that PA&E thought would be important in writing a news article-----read the two newspaper articles.

# Physicist disputes TMI health

Harrisburg Patriot

report

By MARY O. BRADLEY/Staff Writer

A nuclear physicist says data he reviewed does not support the "official record" that no health effects will result from the Three Mile Island accident.

But, Dr. Jan Beyea said, he found no evidence that "large numbers" of residents will be affected adversely by radiation from the accident.

He said further studies are needed to answer questions about the amount of radiation released and its effect on residents.

Beyea's study, released yesterday, was based on a comparison of 100 dose assessment reports published by various groups and individuals after the 1979 accident.

Beyea said he found gaps in base data about the amount of radiation released during the accident and "methodology flaws" in the reports. It has generally been accepted that gaps in radiation monitoring occurred during the accident.

The study, which took two years, cost \$100,000. It was paid for by the TMI Public Health Fund.

Blue-ribbon panels which investigated the accident concluded that the radiation dose to off-site general population was 70 millirems, which would cause no health effects.

Residents receive about 100 millirems of radiation annually from natural background sources.

Beyea said he and the six scientists and engineers who assisted him did few independent calculations in the study released yesterday.

"The scientific record [reviewed by Beyea and his panel] does not support the official record that no health effects" would result, Beyea told a news conference in the Holiday Inn-Center City. Beyea is a nuclear physicist and a senior staff scientist at the National Audubon Society.

But, he added, "no evidence" was found in the scientific record that a "large number of people" had been affected by radiation.

Beyea said the "early assessment" of no fatal cancers "killed" a complete study of the available data. Beyea said he "found an enormous amount of data" that was never analyzed.

He recommended additional studies on dose assessment, including gathering new data from whatever sources are available.

The TMI Public Health Fund was created from \$5 million of a \$25 million settlement of a class action lawsuit stemming from the accident.

A purpose of the fund was to address public health issues of research and education to resolve outstanding issues about the accident.

Because of earned interest the amount of the fund as of May was \$6.6 million.

Between November 1981 and May 1984, the fund spent \$451,992 on projects and consultants' fees.

All expenditures must be approved by U.S. District Court Judge Sylvia H. Rambo, the fund's supervisor.

## TMI Health Studies

### Flawed, Expert Says

Lancaster Intell

8-30-84

HARRISBURG (AP) — Official statements that radiation from the Three Mile Island nuclear accident caused no adverse health effects cannot be justified, according to a court-supervised study released Wednesday.

Official and unofficial estimates of how much radiation the plant's neighbors received vary widely and are all based on incomplete evidence, said Dr. Jan Beyea, a nuclear physicist who conducted the \$100,000 review.

The study commissioned by the TMI Public Health Fund analyzed 100 reports regarding radiation releases during the 1979 accident.

"I found methodological flaws in every report," said

Beyea, a staff scientist at the National Audubon Society. He added that the flaws were "not surprising given the pressure for quick answers after the accident."

TMI's Unit 2 suffered the worst accident in U.S. commercial nuclear history in March 1979, when its reactor core overheated and radioactive gas escaped into the environment.

The largest estimate of the population's radiation "dose" from the accident is more than 200 times greater than the smallest estimate, he said.

The federal Nuclear Regulatory Commission has concluded that radiation from the accident

would result in no deaths from cancer.

But based on the available evidence, the number of cancer deaths due to the accident could be anywhere from zero to 130, Beyea said.

He called for further study in 16 areas. The research would include collection of "private data," such as readings from radiation-sensitive film badges used by dentists and X-ray workers. Scientists also could analyze bricks on houses in the area to measure any absorbed radiation, he said.

"There's a lot of private data that we believe exists," he said.

Beyea acknowledged that further study could confirm the official finding of no adverse health effects.

Until then, he said, "If the data is not there, we should not pretend it is there."

Lisa Robinson, a spokeswoman for TMI's operator, GPU Nuclear Corp., said the company had only recently received the report and refused to comment on it.

One of the flaws in the official investigation of the accident was the assumption that radioactive iodine inside the reactor building was trapped by filters, the report said. Subsequent information indicated that the radioiodine managed to bypass the filters, the review said.

The Public Health Fund was formed in 1981 as part of a settlement of a class-action suit against General Public Utilities Corp., the plant's owner, on behalf of residents and businesses within 25 miles of the reactor.

It was financed with \$6 million from the \$31 million settlement and is supervised by U.S. District Judge Sylvia Rambo.

The fund's attorney, David Berger, said the fund would ask the judge to approve spending about \$500,000 to pay for the studies Beyea proposed.

### Entries Planned

#### At TMI II

MIDDLETOWN -- Entries into the Unit-II containment building at Three Mile Island Nuclear Station are planned for Thursday and Friday, September 13 and 14.

Venting of the containment building is continuous and the release of krypton 85 will be approximately one curie per day.



### Horror Stories

The Palisades Nuclear plant was the site of a diver receiving 4.5 rems to his right thigh during a series of three dives on March 18, 1984 while trying to repair a fuel transfer device underwater. The diver knelt in a layer of radioactive sludge on the floor. A patient undergoing treatments for a brain tumor was given 200 rads of treatment rather than 100 from a cobalt-60 teletherapy unit and after 15 treatments developed a severe reaction. The NRC monitored medical licensee did not implement effective written procedures to guard against misadministrations. Jim Hurst of PANE gave blood for the cause on Sept. 1, 1984. While putting together the PANE wooden booth for an information display at Kipona, he incurred a gash over the eyebrow that required 5 sutures to close it at Hbg. Hospital. He is resting comfortably. From the August 15, 1984 NRC OI report of Ben Hayes to NRC Commissioners on the falsification of TMI #2 leak rate investigation we got these two final horror stories. Harold Hartman, former control room operator at TMI, was forced to resign when a company psychologist said he was too high strung to work in a security area, even though he had worked there 6 years. A Dr. Cohen said Hartman expressed symptoms of hypertension and stressful behavior and was critical of his employer (GPU). Hartman performed well under stress as a nuclear submarine operator prior to coming to GPU. Hartman voluntarily resigned on March 30, 1979. One TMI worker, E. H., received 4.1 rem during the March 28, 1979 accident. His hair was contaminated and he had to wait 6 weeks before the readings for his hair went to background, so he could get a haircut. He also had radiation on his fingertip and tried to remove it with sandpaper. It worked but he thinks it also took away his fingerprint.

### PANE'S BOOTH

The PANE wooden booth appeared at Kipona in Harrisburg September 1 - 3. The booth has been used several times over the last couple of years at fairs etc. to hand out information. Jim Hurst and Dick Neidinger volunteered their time and resources to build the booth in 1982. Helping for the Kipona set-up and teardown were Bill Leonard, Al Manik, Don Hossler, and Jim Hurst and several members of TMIA.

### TRIVIA

A 1,000 MW reactor (a little larger than TMI #1) requires 30 tons of uranium fuel a year for which enrichment costs are more than 20 million dollars.

### MR. PARKS AND BECHTEL

Parks was reassigned from TMI to a coal gasification project in southern California in August 1983. Parks was allegedly "released" from Bechtel employment in February 1984. This dismissal is under suspicious circumstances and according to Richard Parks' attorney a violation of settlement terms with Bechtel and therefore discriminatory.

### TMI #1 STEAM TUBE REPAIRS

This "undamaged" reactor is sure having its problems. Plugs used to fill cracked steam generator tubes have fallen out. On August 18, 1984 GPU said 7 of 118 tested at lower than expected loads came out. These will have to be replugged because a leak could result in the release of radioactive steam to the air. More than 1200 were plugged and taken out of service in 1981. The inspection testing was initiated when 6 more plugs had come loose bringing the total now to 13 as of August 18, 1984. Then on August 29, 1984 GPU said 1,000 of the more than 1200 that had been plugged were tested. Of the 1,000, 25 would have to be replugged and another 253 will have to be retested. These 253 moved slightly during pull testing and will have to be mechanically rolled and retested. GPU says the tests are done at 3500 pounds per square inch while the design pressure for TMI #1 is 2,155 pounds per square inch. Meanwhile Mick Rood of The Patriot reminds us in August 29, 1984 edition that 15 steam generator tubes, that did not have to be plugged, were leaking while under low pressure in June. The NRC says it may take until October to evaluate the situation.

### GPU/MET-ED INTEGRITY

In 1975 they applied to the EPA for a permit to allow them to bypass their pollution control system whenever they deemed it necessary in order to maintain regular electrical service, allowing them to dump radioactive water into the Susquehanna. The Lancaster Environmental Action Federation (LEAF) became a party to the hearings for the permit and Met-Ed mysteriously withdrew the request.

### TMI 9 JURORS

11 of the 12 jurors feel that TMI #1 should not be restarted. The 12th had expressed similar sentiments but could not be reached after the trial. The foreman John W. Kennedy made the statement for the jurors. The TMI 9 helped further the jurors understanding of the issue.



Bob Englehart

Do you trust GPU?



I SAY, GRANTED, RADIOACTIVE WASTE DISPOSAL IS A PROBLEM. AND A SLIP-UP COULD MEAN AN END TO LIFE ON THIS PLANET... BUT, GEE WHIZ, IT'S NOT LIKE WE'RE NOT GOING TO BE CAREFUL!



### Device records new radiation type

United Press International 9-4-84

Officials of Three Mile Island said yesterday that they are puzzled by a radiation-measuring device that signaled the presence of a type of radiation not found at the nuclear plant.

A dosimeter worn by one worker at the crippled nuclear plant in Londonderry Twp. shows he received low-energy beta radiation, which has never been found at TMI, plant spokesman Douglas Bedell said.

The device registered an exposure close to the maximum amount considered safe for an entire year, but co-workers in the same area of the plant at the same time had no abnormal readings, Bedell said.

Even if the exposure occurred,

it would not be expected to have any health effects because that type of radiation is totally absorbed in the skin's outer dead layers, he added.

The dosimeter is being tested for a possible malfunction and plant officials are "brainstorming to consider any kind of possible circumstances that might have produced that kind of radiation," Bedell said.

The Nuclear Regulatory Commission has been notified of the questionable reading from the thermoluminescent dosimeter, Bedell said. Until the matter is fully investigated, the employee will not be assigned to areas where he would be exposed to radiation, he said.

The radiation monitoring device is routinely worn by all workers who enter controlled areas of the plant, damaged five years ago in the worst commercial nuclear accident in history.

## Mondale says TMI should be closed forever

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# PANE

A citizens' public interest organization  
of the Middletown area

THREE MILE ISLAND

## Clean it. Close it.

OCTOBER 1984

### Last Newsletter

This is the last newsletter for 1984. We take a break in November and December. The next issue will be typed in mid-January and you should receive it by the end of January or early February. If you should desire any information during this period, feel free to telephone a FANE board member.

Joyce Corradi 939-0345	Elizabeth Chavey 939-7261	John Garver 944-0678
John Kovalic 944-4532	Don Hossler 944-2250	Jim Hurst 944-2359
Paola Kinney 939-3312	Linda Braasch 939-4905	Genevieve Emerick 939-9037

### Vote

This election is critical, November 6, 1984, FANE reminds you to vote.

### PANE Meetings

Frey Village Guest House, 7 - 9 P.M., N. Union Street, Middletown  
November 11, 1984, December 9, 1984, January 13, 1985, February 10, 1985  
All members and interested citizens are encouraged to attend.....

### Mondale and TMI

Former Presidential candidate John Anderson came to TMI on October 2, 1984 and reminded area residents that Reagan is more interested in business than protecting our health and safety. He claimed the NRC commissioners appointed by Reagan are interested in when to start TMI, not whether. He reminded us of the 1982 3 county referendum around TMI where Reagan said the issue of TMI on a ballot is "too complex for the voters to decide." Anderson said he backs the Mondale/Ferraro ticket.

### GPU

The only other reactor, Oyster Creek, in New Jersey has been shut since Feb. 14, 1983; yes, 1983 for 100 million dollars of repair work.

### The Chairman of GPU Nuclear

We have an April 16, 1979 "Washington Merry-Go-Round" article written by Jack Anderson about John O'Leary now Chairman of the Board of Directors of GPU Nuclear. Back then, Anderson called O'Leary a "... paper tiger, a pet pussycat for the power companies." O'Leary just after the March 28, 1979 accident at TMI was arguing for relaxing licensing and siting standards for nuclear power plants. O'Leary spoke at the dedication of TMI #2 in the Fall of 1978. O'Leary on that day is quoted by Anderson as saying in regards to taking care of nuclear waste "This is not a tremendously technologically complicated business. It is not nearly so difficult, I believe, as the safety of a plant such as the one we are setting next to here, and trusting, I might add, by our very presence." Anderson said O'Leary also said that nuclear energy "... is a bright and shining option for this country ... the best option available to us." Anderson said "The former watchdog is now eager to sit up and beg or roll over and play dead at the signal of the utilities." Now of course O'Leary chairs GPU Nuclear Board of Directors, since 1983. He oversees a board that meets each month to select management, monitor performance, approve major policies and approve budgets. Interestingly, when the NRC was looking over the FANE psychological stress information a corporation called MITRE was called on to hold meetings for the NRC on the issue. We cynics will point out to you that O'Leary worked for MITRE in 1974 and 1975 and the old NRC (AEC) in 1972, 1973, and 1974. Just grabbing at straws you say, well that's what this continuing accident does to citizens who have principles and believe that the issue is very, very important to everyone's health and safety. Vested interests turn up at the strangest times.

### TMI Tidbits

Through December 1983, 409 million was spent working on TMI #2, it is projected another 572 million is needed to finish the job, FANE says more like another 900 million to 1 billion. We hope the work is done before the year 2000.

### Some of the GPU Nuclear Board of Directors!!!

Robert V. Laney - a member of the GPU Nuclear Board of Directors assisted Admiral Rickover in completing that assessment of GPU Nuclear's management competence. Where is character and integrity to be found???



GPU Nuclear board member Warren Witzig is a member of the Sierra Club. Phil Clark, Bob Arnold's replacement, has worked for GPU since "late 1979", he also is on the board. Ed Kintner worked for AEC/NRC from 1966 - 1976. Herman Dieckamp holds a number of patents relating to nuclear power. William Gifford on the board and V.P. of Communications for GPU worked in the White House and prior to joining GPU in November 1980 he worked, briefly, for Bechtel Corporation. Henry Hukill V.P. of TMI #1 and on the board served for 4 years on the staff of Admiral Rickover.

This newsletter typed October 10, 1984.....

TMI Bits and Pieces

We saw on August 8, 1984 a letter to GPU from NRC saying an audit of environmental qualification files for electrical equipment was going to take place. Let's hope with that warning that the audit goes better than the one NRC did with Bob Pollard of UCS looking over their shoulder. PANE received a copy of a letter August 7, 1984 sent to Ellyn Weiss of UCS from NRC regarding staff notes on TMI #1 environmental qualification file audits conducted March 20 and March 21, 1984. The NRC said all deficiencies had been resolved. The notes were just that badly machine copied notes that we had trouble reading--- good luck Ellyn. A July 31, 1984 letter to GPU from NRC said NRC is concerned about the ability of Rockbestos Cable to perform satisfactorily after a fire. GPU wants to use Rockbestos rather than one hour fire barrier material. An IE information notice of March 7, 1984 from NRC says stress corrosion cracking was responsible for a part of a fuel assembly separating in a spent full storage pond in another reactor and of course cause problems in TMI #1 steam generator tube.

Some Trivia on Radioactivity

An NRC staff report of March 1981 estimated TMI #1 released annually would be 7,555 curies of radioactive gasses and 2,008 curies of radioactive nuclides in liquids.

The Krypton 85 inventory in TMI #2 was 100,000 curies before the accident according to the Final Programmatic Impact Statement Nureg 0683. That document said 42,000 to 45,000 curies were vented in 1980 and said 55,000 curies remained in the fuel and primary coolant. They thought about 40,000 curies of the 55,000 remained in the fuel and estimated that each of the 30,000 fuel pins has about 1.5 curies.

The July 2, 1984 draft surveillance plan from the EPA estimates 25 to 35,000 curies of Krypton 85 are estimated to remain in the core of TMI #2. EPA also estimates 900 to 1500 curies of tritium remain in the reactor core and about 2,000 curies are contained in the 1.6 million gallons of processed water.

Jan Beyea's study said a weapons plant reactor area at Savannah River Georgia release about 350 thousand curies of tritium a year.

During the 1980 TMI #2 venting 3 PhD's conducted a study under the auspices of Accord Research and Educational Associates (AREA). Met-Ed claimed the amount of particulates were small and exhaust filters would keep particulates below detectable limits. NRC waived an EIS and temporarily suspended federal regulations regarding off-site releases. Sr 90 released was 1 - 4 million times greater than the utility had estimated.

56 additional cancer adult fatalities from ingesting food from this area could be anticipated according to the AREA study as a result of the Kr 85 venting in 1980.

TMI Emergency Preparedness

We read the transcript of an August 16, 1984 meeting between GPU/NRC/FEMA/ & FEMA called by GPU to see if the October 3, 1984 emergency preparedness exercise would demonstrate the communications capabilities that had been questioned in the original ASLB hearings, by the State. It appears GPU used the Aug. meeting to push for their view that the focus of concern was on a demonstration in the communication equipment and the people that use the equipment and the telephone numbers and names were correct. However evidently all deficiencies are not covered when they just look at communications drills. Evidently there were problems with a June 1981 drill. GPU tried to get them resolved in November 1983, June 18, 1984, and July 17, 1984. FEMA is saying for all the deficiencies to be looked at, an exercise must go further than a table-top exercise. GPU says they have deficiencies but they just want to be tested like any other plant. Evidently GPU has not been able to get Dauphin County to participate in a full table-top exercise. NRC wants an emergency plan with no deficiencies before deciding on restart (page 39 lines 13 to 16). Then NRC made some "off the record" comments to GPU and the meeting ended.

NEXT PANE MEETING ---- NOVEMBER 11, 1984 7 - 9 P.M. FREY VILLAGE GUEST HOUSE



BNW says they would like to begin fuel removal at A1 2 in July 1985. This article is reprinted to provide information and actions that persons in the Chicago area are taking. The article is from World Watch - Winter - 1984, Citizens Against Nuclear Power

## HIGH-LEVEL RADWASTE TRANSPORTATION

by Paul Eneke and Lenore Gerdow

Shipments of over 400 tons of deadly radioactive spent fuel rods continue to roll over Chicago area highways despite opposition from citizens, pressure from elected officials and a potentially disastrous accident near Gary, Indiana. Begun last August and expected to continue throughout 1984, are 371 individual shipments scheduled for travel over highways I-55, I-94, and I-294, and by rail over the Burlington Northern, and Elgin, Joliet, & Eastern Lines.

The shipments include: 114 truckloads destined for Point Beach, Wisconsin and 30 truckloads headed for Dresden, Illinois, both originating from West Valley, New York. In addition, there are 30 rail shipments from Nebraska and 88 truckloads from California, both destined for the Morris Facility in Illinois. A New York court order aimed at cleaning up the defunct and leaking West Valley reprocessing plant, has spurred the Point Beach and Dresden shipments. The others have been economically motivated, since it costs the utilities far less to ship its radioactive waste elsewhere rather than to find permanent, safe solutions for its disposal.

The spent (or irradiated) fuel rods are fiendishly toxic. The rods have been removed from the reactor core after

several years of use because radioactive by-products, which are produced by the fissioning process, build up to the point where the enriched uranium no longer fissions properly. After a short "cooling" time, the rods are placed into 25 ton casks (1/2" thick steel shells surrounding 6" thick lead liners). Nevertheless, radiation can still be detected within 10 feet of the loaded casks. One truck shipment contains ten times the cesium contained in the Hiroshima bomb. Cesium is one of the most hazardous radionuclides in irradiated fuel. Over 2 1/2 million shipments of radioactive materials are made yearly in the United States, and estimates call for up to 5 million per year by 1985. Dr. Marvin Resnikoff, a nuclear physicist who has served as an international consultant on matters of nuclear waste, warned of the possible effects of a highway accident: "If radioactive gases escaped under calm weather conditions, people within five blocks would immediately die of burned out lungs, and anyone within the surrounding square mile would be susceptible to cancer." A report to the Department of Energy estimated that such an accident would cost as much as \$3 billion for clean up and relocation of residents.

There are many other major concerns regarding spent fuel shipments, to begin

with: Are local agencies capable of adequately responding to an accident along the route? How will communities be notified and evacuated in the event of an accident with radiation leaks of this size and caliber? How many hospitals have the space and expertise to handle hundreds of radiation victims? Federal regulations do not even require the shipper to contact local authorities to determine the effectiveness of local planning, nor do they offer any help in training. Yet, the NRC asserts that 90 percent of the people within ten miles of a nuclear spill could be evacuated within 4 hours.

The shipping casks have been inadequately tested. The NRC's safety claims for current model casks are based on scale model and computer simulation tests that have been criticized by even government contractors. The testing procedures use fresh fuel which is far less brittle and much cooler than hot spent fuel. Fire tests are made at temperatures below that of an average highway accident fire. Drop tests are done from elevations of only 30 feet despite the fact that many shipments travel on bridges at a much higher altitude. No federal regulation requires that casks be able to withstand crashes of more than 30 miles per hour. But more than three-fourths of all truck accidents occur at speeds certainly greater than 30 mph. Moreover, the casks are susceptible to losing coolant and releasing radioactivity if struck sideways (a likely result if a truck jack-knifes) at speeds as low as 12.5 mph.

Accidents have already occurred—the latest on December 9, 1983 when a flat-bed trailer carrying a waste cask separated from the tractor on Interstate 80 three miles from the Illinois border. The driver had swerved to avoid a collision at a point where the highway narrowed because of road construction. Officials reported "no abnormal" radiation leaks at the site. The NRC suspended shipments immediately but they were resumed within two weeks.

There is also the question about who would be held financially responsible for the costs if an accident occurred. Under the Price-Anderson Act, the U.S. Government will supply \$560 million, but this would cover only a fraction of the costs.

But the main question to be asked of the industry is simply—are these repeated shipments even necessary in the first place? Have all the other alternatives been fully explored? The return of these shipments will not provide a final resting place for the waste. In fact, it is likely that these assemblies will be transported again creating a revolving door effect at some facilities like Morris.

Though local and state authorities have some legal authority to restrict and regulate radioactive materials passing through their jurisdictions, many have found the situation presents itself as a double-edged

situation presents itself as a double-edged sword. While local agencies are responsible in the event of an accident, the Federal Department of Transportation has controlover when, where and how radioactive materials are shipped. The city of Aurora, Illinois is feeling the edge of the sword. Having a population of 84,000, Aurora is along the route of rail waste shipments from Nebraska to Morris that are scheduled to begin in a few months. The Aurora City Council has expressed willingness to pass a local ordinance forbidding the transport of nuclear waste through the town, but has taken no action due to a statement by Attorney General Neil Hartigan that such an ordinance would be thrown out of the courts. "The people of Aurora are being bullied," charged Dr. Fred Millar of the Environmental Policy Center based in Washington, D.C. who has been advising the city. Millar has pointed out that more than 200 municipalities, townships, counties and other governmental units across the country have enacted such legislation (25 Cleveland suburbs proposed city ordinances to block the shipments).

Other actions that have taken place locally include those taken by Philip Rock, candidate for the Democratic nomination for the U.S. Senate, who has introduced legislation in the Illinois State Senate to curb rail shipments. Another candidate for the Senate nomination, Alex Seith, has pledged, if elected, to draft federal legislation which would "put safety before costs." Citizens Against Nuclear Power, along with four other citizens groups filed a petition with Governor Thompson, the NRC, and the State Department of Transportation and Safety asking that a number of the above questions be answered before the shipments are allowed.

Nationally, citizen grassroot efforts have been effective. One such community action group managed to get planned shipments through their small upstate New York town re-routed simply by drawing enough negative attention to each approaching truck. The group, Save the River, posted look-outs who notified other organizers each time a truck carrying spent fuel casks was spotted. Concerned citizens then rallied, lined the road and began shaking their fists at the truck shouting, "Truck you!" thus foiling the utilities attempt to keep these shipments intentionally inconspicuous. Seeing this sight, drivers chose to "take the path of least resistance," as spokesperson Abbie Hoffman puts it. The drivers chose to turn around their rigs rather than to face a confrontation.

### WHAT CAN YOU DO?

Letters are urgently needed to go to your state legislator, mayor, and Governor. We have a right to decide when, where and how these shipments should be made—if at all.

If the utilities are truly "working for you," then why are they playing with our lives? The waste producers must be held responsible for our safety.

The decision is up to you.





'I only claimed to be perfect.'



'Nuclear waste problem? I don't know about you, but I don't want my kids growing up in a world where there aren't any problems left to solve!'

# Do you trust GPU?

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