

# Three Mile Island Alert

The Newsletter of Three Mile Island Alert

October 1998

## Activists Target Vermont Yankee in Nuclear-Free New England Drive

*from an August 6, 1998, Nucleonics Week article*

With the closure of four nuclear power plants in New England in the last six years, anti-nuclear activists believe a "nuclear-free New England" is within reach, and Vermont Yankee is their next target.

The Nuclear Information & Resource Service (NIRS), a national, Washington-based group, and the Citizens Awareness Network, a New England group based in western Massachusetts, are sponsoring a week-long activist training session later this month in Vermont.

According to organizers, in addition to training and networking sessions, the "Northeast Action Camp," to be held within 10 miles of Vermont Yankee August 21-28, will include a public rally in Brattleboro calling for the shutdown of the plant as well as a demonstration involving civil disobedience at the plant site in Vernon. "What we're doing is trying to rekindle a coordinated effort of resistance," said Paul Gunter, director of the reactor watchdog project at NIRS. "There has historically been local opposition to

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## Long-time TMI-1 Opponents Vow to Fight Unit's Sale to AmerGen

*from a July 30, 1998, Nucleonics Week article*

A Pennsylvania citizens group that has long alleged there were serious public health effects from the 1979 Three Mile Island-2 disaster is devising strategy to fight the proposed sale of TMI-1 from GPU Inc. to AmerGen Energy Co.

It's like "the Three Stooges are selling a nuclear reactor to the four Marx Brothers," said Eric Epstein, chairman of Three Mile Island Alert. He alleges there are safety questions and other concerns that merit U.S. regulators blocking the sale.

TMI Alert unsuccessfully opposed TMI-1 restart in a six-year NRC proceeding after the TMI-2 meltdown. Epstein said the group wants TMI-1 decommissioned, but had GPU reached a deal to sell the unit to someone the citizens group considers a better operator -- Epstein specifically mentioned Duke Power -- TMI Alert probably would not have objected to the sale, he said.

But Epstein said the group is uneasy about PECO's safety record. Epstein cited a proposed \$55,000 fine against PECO as evidence of the

company's alleged problems. NRC proposed the fine a few weeks ago for equipment operability violations at Limerick, and PECO hasn't yet decided whether to pay or protest it. (Ed. note: see related article, page 14.)

AmerGen -- a joint venture of PECO Energy and British Energy -- could pay up to \$180-million for TMI-1. The lion's share of that would be for the unit's fuel. TMI-1 has averaged 90% capacity factor for the 36 months ending May 31 and had no unplanned outages in the first five months of 1998, according to McGraw-Hill's World Nuclear Performance. PECO's plants have averaged 85%-86% capacity in the same 36-month period.

If the deal is approved, it will be the first sale of a nuclear power plant in the U.S. The announcement has generated some optimism for the U.S. nuclear industry, and even some critics say it marks the dawn of a "secondary market" for U.S. reactors.

AmerGen is now in a 90-day due

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## Three Mile Island Alert

Three Mile Island Alert (TMIA) is a non-profit citizens' organization dedicated to the promotion of safe-energy alternatives to nuclear power, especially to the Three Mile Island nuclear plant.

Formed in 1977 after the construction and licensing of TMI Unit-1 and the construction of the infamous Unit-2, TMIA is the largest and oldest safe-energy group in central Pennsylvania.

TMIA members interested in specific aspects of nuclear power are encouraged to join one of TMIA's committees. These committees include:

- Radiation Monitoring
- Low-level Radioactive Waste
- Health Effects of TMI
- Nuclear Plant Security

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# Beware of the Buyer

*A TMIA Opinion*

*by: Eric Epstein, Chair, Three Mile Island Alert*

On July 17, 1998, AmerGen, a corporate venture comprised of PECO Energy and British Energy, made an offer to buy Three Mile Island-1 for \$100 million (\$500 million less than its book value). The proposed sale would pay the current owners, General Public Utilities (GPU), \$23 million for the nuclear plant and \$77 million for nuclear fuel over a five year period. Unfortunately, this marriage is a Faustian Pact that would yield PECO and GPU short-term economic relief while exposing area residents to increased health and safety risks:

— PECO Energy has the highest electric rates in the state for all classes of customer. (Pa PUC, Electric Utility Operational Report, January 30, 1997.) PECO also has the second highest average residential gas rates in the Commonwealth. (Pa PUC, Natural Gas Utility Update, August 19, 1998.) In addition, "Philadelphia Electric was significantly worse than average" in the handling of consumer complaints and "the worst in the industry" in collections. (Bureau of Public Liaison, Pa PUC, Fall 1995.)

— On June 12, 1998, the NRC fined PECO \$55,000 for "two program deficiencies that led to the impaired performance of the Unit-3 emergency cooling pump ... ." (NRC Inspection Report Numbers 50-277/98-03 and 50-278/98-06.)

— On May 27, 1998, the US Justice Department sued PECO for more than \$67 million in damages caused by PECO's alleged renegeing on a contract to buy 30% of the River Bend nuclear power plant owned by Cajun Electric Power Cooperative. (*Reuters*, Wednesday, May 27, 1998.)

— In March 1998, "The Company reported a net loss of \$1.5 billion or \$6.80 per share. Included in these results was an extraordinary charge of \$3.1 billion (\$1.8 billion net of taxes) or \$8.24 per share, in the fourth quarter to reflect the effects of the December 1997 PUC order (as revised in January 1998) in the Company's restructuring proceeding." (Report to Shareholders, C. A. McNeill, Jr., Chairman, President and CEO, PECO Energy.)

— PECO was ordered by the NRC to shutdown Peach Bottom-2 and -3 on March 31, 1997, due to operator misconduct (e.g., sleeping, spitball battles, and purveying "adult" magazines). This was the first and only occasion that the NRC ordered a nuclear plant shut down. Zack Pate, President of the Institute for Nuclear Power Operations (an industry think-tank), declared that Peach Bottom "was an embarrassment to the industry and to the nation ... . The grossly unprofessional behavior by a wide range of shift personnel ... reflects a

*(Continued on page 8, column 3)*

## Sale and Early Closure of Units, A Glimpse at Industry's Future

from a July 23, 1998, *Nucleonics Week* article

Last Friday offered a illuminating peak into the U.S. nuclear industry's near-term future. In the span of just a few hours, it was announced that one nuclear unit was being sold and another was closing down prematurely.

The sale of GPU, Inc.'s Three Mile Island-1 to the U.S.-British joint venture AmerGen Energy Co. was hailed by analysts and industry leaders. The Nuclear Energy Institute (NEI) said the proposed deal "demonstrates that nuclear power plants are well positioned for competition in the electricity generation business." Nuclear critics called it a "fire sale."

If approved, the deal would be the first sale of a nuclear power plant in the U.S. and the first of a planned series of acquisitions by AmerGen, formed last year by PECO Energy Co. and British Energy (BE) to buy and operate U.S. nuclear plants.

AmerGen could pay as much as \$180-million under terms of the transaction. The \$100-million initial price, including \$23-million for the Babcock & Wilcox PWR itself and \$77.6-million over five years for its fuel, could increase by tens of millions of dollars depending on what happens with energy prices.

PECO and GPU said the final sale price depends on additional payments to GPU based on the wholesale price of energy in the

area surrounding the plant at the time of settlement. GPU spokesman Jeff Dennard said GPU could get an additional \$80-million based on the formula.

GPU had trouble defending portions of the deal -- such as why the reactor was worth less in the deal than the fuel used to run it and why GPU agreed to buy the energy from the plant for a two-year period (beginning in January 2000 if the deal closes December 31, 1999, as planned).

"I'm not sure I can give you an answer," Dennard said. "This is the first and only deal of its kind." As to the value of the reactor versus the fuel, "that's what the market says they are worth," Dennard added. "We are breaking new ground here. I don't think you can say it was because of this or because of that. These people were all breaking new ground, and that is what they came up with."

PECO spokesman Bill Jones said the figures were agreed upon as the fair price for the assets following months of discussions with GPU.

The agreement in principle also addresses decommissioning costs for TMI-1, which is licensed to operate until 2014. When and if the sale closes, GPU is supposed to have \$320-million in its decommissioning trust fund.

Dennard said GPU Nuclear has \$202-million in the decommissioning trust fund and has agreed to put in another \$118-million at settlement. "That's the limit of our liability," Dennard said.

Late last year, GPU estimated decommissioning TMI-1 would cost \$409-million, Dennard said, "so we feel that's a darn good deal for our customers." Recovery of that money from ratepayers is subject to state regulatory body reviews in both Pennsylvania and New Jersey. GPU will maintain the fund at the investment direction of AmerGen, Jones said.

### Everybody A Winner

Gary Hovis, an analyst with Argus Research, said there were no losers in the sale. "It's good for PECO, good for British Energy and good for GPU," he said. "I think the wave of the future is nuclear power, and this puts PECO far ahead of the pack," Hovis said, adding that it shows "a lot of courage" on the part of PECO.

While he speculated there would not be a rise in the stock price in the short-term, he said stockholders will see the benefits within the next four or five years. On Monday, GPU's stock closed at 37 and nine-sixteenths, down one-half. The day before the deal was announced, it closed at 38 and five-eighths. PECO

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finished the day Monday at 29 and three-sixteenths, up one-sixteenth. It had closed at 28 and thirteen-sixteenths the previous Thursday.

Hovis called the selling price "fair" and said he believes as the country focuses more attention on the limited supply of electricity sources, there will be an increased willingness to extend the life of existing plants and to "throw more financial resources" into technology to lower nuclear plant costs.

Chris Neil, a senior consultant at Resource Data International Inc., a Boulder, Colo.-based firm that analyzes energy and natural resources, called it "exciting" to see the "first whole nuclear plant sell."

"It's nice to see that a nuclear plant can trade owners if it wants," he said. Neil said the seemingly low selling price likely reflects that there was "not much value" in the plant. He noted that single unit plants like TMI-1 generally have higher operating costs, but that by combining it with its other nuclear plants, PECO can "run the plants better and be more competitive." TMI-1 is located near PECO Energy's existing nuclear stations (Peach Bottom and Limerick) in Pennsylvania, which offers potential management and infrastructure benefits.

Neil said the economies of scale don't apply to GPU's other operating nuclear unit, Oyster Creek. "Oyster Creek is not nearly as good an opportunity," he said. "It's too small and too expensive" to

operate. AmerGen considered buying Oyster Creek, but decided not to take the plunge because of a "big difference" between energy production and costs per kilowatt-hour compared to TMI-1, PECO's Jones said. In all likelihood, GPU will prematurely close Oyster Creek in 2000.

TMI-1 is the first of several potential U.S. investments AmerGen is considering.

TMI-1 is a high-quality plant, with excellent safety and commercial track records, the companies said. Issued an operating license in 1974, the reactor has been a consistently good performer, currently returning load factors of around 90%.

TMI-2, the site of the worst U.S. commercial nuclear accident, will continue to be owned by GPU, which will be solely responsible for its liabilities.

Due diligence, involving an in-depth review of TMI-1, is expected to take several months, and regulators will have to approve the sale. Agencies that must give their okay include the NRC, the Federal Energy Regulatory Commission, the Securities & Exchange Commission, the Pennsylvania Public Utility Commission, and the New Jersey Board of Public Utilities. Regulatory approval is expected to take up to two years.

A decision to acquire the plant will also be subject to approval by British Energy's board of directors. British Energy's share of the cost of

investment would be 25-million pounds (U.S.\$41-million). The operating license for the station isn't expected to be transferred until well into 1999.

AmerGen is working on other U.S. acquisitions. BE's chief executive, Peter Hollins, said "We've made real progress in North America over the last year in developing business opportunities and are now ready to undertake due diligence on what we hope will be the first of a tranche of AmerGen nuclear plants. I am confident that BE, working with our partners PECO Energy, can play a significant role in the developing competitive U.S. electricity marketplace. But we won't rush into anything -- that's what due diligence is all about. We must ensure that we get a well-thought-out deal for our shareholders."

For PECO Energy, Chairman Corbin McNeill said, "We're pleased with the way AmerGen is developing. When we formed our joint venture with BE, we broke new ground for the U.S. I'm determined that AmerGen will now lead the way in achieving commercial success for nuclear plants in developing U.S. markets. There's a long way to go -- but this is an important step on the road."

### Fire Sale of a White Elephant

Mixed metaphors aside, nuclear power critics cautioned that it is too early to proclaim the first sale of a U.S. nuclear plant a major rallying point for the industry.

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"You are really looking at a white elephant sale here," said Scott Denman, executive director of the Safe Energy Communication Council. GPU, Inc., which is withdrawing from the electric generation business to concentrate on transmission services, sold TMI-1 for "next to nothing," Denman claimed. "When you look at the numbers, it appears GPU is actually paying to get it off their hands."

David Lochbaum, nuclear safety engineer with the Union of Concerned Scientists (UCS), compared the sale to "buying a used car with the contents of the gas tank being worth more than the car itself."

Lochbaum acknowledged, however, that "from a bigger picture viewpoint" the deal is significant. "It seems to be a good transition step" toward development of "a secondary market" for reactors, he said. If such sales become a trend, utilities will have "an option to closing down a plant early...though they are not going to make a huge windfall profit," Lochbaum added. Had such a market existed a few years ago, reactors such as Commonwealth Edison's Zion might still be running, he said.

The UCS official also conceded that AmerGen might do well with TMI-1, given that it is not far from PECO's other units. But he cautioned that PECO's experience is with BWRs, not PWRs like TMI-1. He said that is not an insurmountable hurdle, however,

because British Energy has PWR experience.

### Another One Bites the Dust

While nuclear industry supporters crowed about the significance of AmerGen's purchase, they were silent about Northeast Utilities' (NU) decision to permanently close Millstone-1, more than 11 years before its operating license expires.

Noting that there were no sale prospects and saying the plant has "insufficient value" for its customers, Michael Morris, NU chairman, president and chief executive officer announced Millstone-1's closing after filing an updated economic analysis on the unit with the state Department of Public Utility Control.

Morris said the analysis showed a slight savings to customers of \$19-million by continuing to run the plant. "However, the \$19-million is less than one percent of the total cost required to operate the unit through the end of its license in 2010. Because the savings to customers are so small and could be further reduced by changes in the variables assumed in the study, such as the prices for fuel or electricity in New England, the company has decided to cease restart activities at Millstone-1 in preparation for final decommissioning," Morris said.

By comparison, Connecticut Yankee, another NU-run plant that also had 11 years left on its license, had a net present value of \$100-million in favor of continued

operation when it was retired in late 1996.

Only a year ago, continued operation of Millstone-1, a 690-MW General Electric BWR Mark I, was pegged by NU as saving customers \$72-million over an early retirement.

"While this analysis could conceivably be used to support continued operation of Millstone-1, the changing utility structure and electric marketplace lead us to the harsh reality that there is insufficient value in Millstone-1 for our customers," Morris said. "We have decided not to bring Millstone-1 back on line as an operating nuclear unit." NU had offered the unit for sale but it apparently found no takers.

Millstone-1 entered a refueling outage in November 1995 and has never restarted. Whistleblower reports led to the discovery that NU has been off-loading the full reactor core for 20 years -- safely, NRC later decided, but in violation of NRC-imposed plant operating requirements. The plant landed on the cover of Time magazine and additional NRC inspections uncovered a host of licensing issues. The NRC determined that NU had lost control of the design basis for the plant. The investigation spread to Millstone-2 and -3 as well. Millstone-3 restarted only June 30 after a 27-month outage that cost the utility over \$500-million. Millstone-2 remains down, but NU plans on restarting it later this year, Morris reaffirmed in his announcement. •

*(Continued from "New England," page 1)*

Vermont Yankee from the 1970s."

Gunter said the activists aren't singling Vermont Yankee out. "We don't really see good performers and bad performers. They're all egregious to the environment," he said. But Vermont Yankee has two characteristics that make it particularly attractive to the anti-nuclear groups. First, the groups are opposed to Vermont Yankee's attempts, with Vermont and Maine, to form a low-level waste compact and site a waste facility in Texas. Secondly, the plant is a General Electric Mark I BWR, which opponents consider an inherently unsafe design.

While the New England Coalition Against Nuclear Pollution is not co-sponsoring the Northeast Action Camp, it supports the effort, Coalition members Michael Daley and Diana Sidebotham said. But the Coalition, one of the oldest indigenous nuclear watchdog groups surrounding Vermont Yankee, is limiting itself to monitoring plant activities -- especially plans to again expand the spent fuel pool there -- and taking whatever opportunities to intervene present themselves. Daley said he also is trying to work at the state level to force the plant into retirement.

Though Vermont Yankee supplies more than 75% of the state's electricity output and provides a third of the electricity that the largest co-owner Central Vermont Public Service Corp. sells, a bill restructuring the electricity industry

in Vermont would have decreed Vermont Yankee's shutdown this year if it had passed the state House. The bill passed the state Senate last year, but failed to pass in the House and can't be reintroduced until the next session in January 1999.

Vermont Yankee plant officials, however, seemed largely immune to all the attention. Company officials directly running the plant, at least, are highly focused on keeping the 26-year-old, 540-MW General Electric BWR shipshape.

### **Managing An Aging Plant**

As nuclear plants go, Vermont Yankee is getting old at 26. Of the New England reactors that have closed, Yankee Rowe made it through 31 years of commercial operation; Connecticut Yankee, 28 years; Maine Yankee, 24; and Millstone-1, 27.

According to Bruce Wiggett, Vermont Yankee vice president for finance, annual economic analyses of Vermont Yankee show it has a net present value in favor of continued operation, versus premature retirement, ranging from \$14-million to \$485-million, "depending on assumptions." For comparison, Connecticut Yankee shut down with a net present value of \$100-million and Millstone-1 went from a net present value of \$72-million to just \$19-million in one year's time, before it was shut down.

On the other hand, the recently announced decision by AmerGen Energy Co., the PECO Energy-

British Energy joint venture, to purchase GPU Nuclear's Three Mile Island-1 suggests there may be a market for older, well-run plants. TMI-1 is 24 years old, although it had a six-year operational hiatus after the 1979 accident at Unit 2. Though no substantive discussions have taken place, Vermont Yankee is one of those plants which AmerGen has been toying with and PECO executives have said New England is an attractive target.

"All the single unit plants are good prospects to be sold to a buyer," said Barry Abramson, a senior utilities analyst with Paine Webber in New York. "Vermont Yankee certainly fits that categorization. And it's in a region where there has already been a lot of capacity retired, which could increase the value of the remaining plants," he said. TMI-1's advantages were that it was a well-run plant and in PECO's backyard. But unlike TMI-1, Vermont Yankee (and Boston Edison's Pilgrim) is a BWR, the same as the plants PECO has experience running in Pennsylvania, Abramson said. PECO Energy's one contract for managing a plant, Illinois Power Co.'s Clinton, is also a BWR, Abramson noted. Unlike TMI-1, though, Vermont Yankee has nine co-owners. "Some have made it clear they want to divest, but I'm not sure there's a consensus there," Abramson said.

### **Planning For The Future**

Vermont Yankee's operators certainly aren't acting as though they

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plan to retire the plant soon. In 1995, Vermont Yankee was the first GE BWR in the world to replace its low pressure steam turbines, casings, and related components. The job cost \$33-million, but was predicted to have a net present value over the remaining life of the plant of \$105-million and add 14 megawatts to the plant's capacity.

Plant officials interviewed recently noted that the plant's recirculation piping was replaced in the mid-1980s, that the core shroud has already been repaired, and that enhancements to the shroud were made during the last outage to accommodate possible future power uprates.

The company is spending an estimated \$17-million between 1996 and 2000 to reconstitute the plant's design basis, and Director of Operations Greg Maret said one of the reasons is to facilitate future power uprates. "Vermont Yankee should be upratable by several percentage points," Maret said, "without any hardware changes." The scope of the design basis reconstitution effort includes a detailed review of 23 systems identified as safety significant in the plant's probabilistic risk assessment, Maret said.

The design basis reconstitution is one of the company's four highest goals for 1998. Conversion to improved standard technical specifications was put on hold until the completion of the design basis job. Two of the company's other

priorities for 1998, an improved corrective action program and a "systems engineering initiative," are related to the design basis effort, according to Maret and Don Leach, vice president for engineering. Maret said the plant's existing corrective action program, dating back to the plant's origins, was inadequate to keep up with the mushrooming input of information over the years. "The system was getting overloaded and in some sense, incoherent," Maret said. "The original system was becoming overwhelmed, fundamentally because of a great influx of information into the system."

Maret said it used to be "the business plan was running the plant. Now it's, 'What is the information coming in from the plant?'" Maret said. "What does the plant need?" The corrective action program now informs plant operational decisions such as design changes, training needs, and budget requirements, Maret said.

Leech said the systems engineering initiative assigns individual systems to individual engineers who are responsible for trending their performance, "kind of the quarterback in understanding the health of the system."

### What About The Waste?

Vermont Yankee's spent fuel pool is getting full and there is no reracking option that will get the plant through the end of its currently licensed life in 2014. The problem of spent fuel pool capacity is a particular sore spot among local

plant opponents -- and its planned expansion, along with encouragement by larger regional and national groups, could rekindle broader local opposition.

Sidebotham, a founder of the Coalition in the 1970s, said Vermont Yankee signed a legal agreement with her group in 1977, the first time it sought approval to expand the pool. The agreement called for the plant's shutdown if no site were found for permanent disposal of the spent fuel by the time the spent fuel pool was full again. That occurred in 1987 and Vermont Yankee reneged on the agreement, claiming, according to press reports at the time, that it wasn't legally binding and that new technologies and better analysis options were available. Vermont Yankee sought and received approval to expand the fuel pool's capacity a second time. Now, they are going for a third expansion, which is one the corporation's four highest priority projects for 1998.

Vermont Yankee will lose full core off-load capability in spring 2001. The company is also evaluating dry storage options. In June, John Hoffman, Vermont Yankee spent fuel and decommissioning manager, said the licensee is only looking at "a relatively small capacity expansion of the existing spent fuel pool."

Vermont Yankee plans to submit a license amendment to NRC this month and would like to have approval for contractor Holtec International to install the additional racks by the fourth quarter 2000.

(Continued from "TMI Opponents," page 1)  
diligence period, reviewing all aspects of TMI-1 operations. Regulatory approval is expected to take 12 to 24 months. Because of this lag time, Goldman Sachs Investment Research has not changed its 1998 or 1999 estimates for GPU or PECO, and continues to rate both as "market outperformers."

Goldman Sachs suspects the deal could be better than expected for PECO down the road. AmerGen agreed to sell 100% of TMI-1's output back to GPU during the first two years after the sale.

Conservative projections released by PECO Energy have not factored in added marketing opportunity for Power Team, PECO's wholesale power marketer, once that two-year deal expires. The benefit of TMI-1 power marketed by Power Team could be substantial, according to Goldman Sachs.

Good performance by Power Team was cited by PECO in announcing its third quarter fiscal 1998 dividend. "Power Team maintained its successful growth strategy of focusing on reliable physical delivery of wholesale power in short-term markets across the country," PECO said July 27. As a result the PECO unit was well prepared for the volatile price markets, the company said. PECO declared a common stock dividend of 25 cents per share for the quarter.

PECO Energy's common stock earnings for the quarter that ended June 30 was 66 cents/share,

compared to 53 cents/share for the same quarter last year. Earnings for the first six months of 1998 were \$1.16/share, compared to \$1.02/share for the first half of 1997, PECO said.

At the end of trading on July 27, GPU stock remained unchanged at \$35.312. After dropping to \$32/share last summer, GPU stock crested at \$44/share in April. PECO stock was trading at \$29.562 and the company was issuing an upbeat report on quarterly earnings. •

### 1999 Peace Calendar on Sale

Once again, TMIA is offering the Syracuse Cultural Workers' Peace Calendar. This 28th edition of the Peace Calendar features artwork honoring Cuban Liberation Day, Sojourner Truth, Urban Gardening, Butterflies, Community Cash, and Disability Rights Activists. The calendar is full-color, 14 x 11 folded and is union-printed in the USA on postconsumer recycled paper. The calendar contains quotes, poetry, and information, and people's history annotations.

The price is \$10, plus \$1.50 postage and handling. Call TMIA at 717-233-7897 to order, or write us at 315 Peffer Street, Harrisburg PA 17102.

(Continued from "Beware," page 2)  
major breakdown in the management of a nuclear facility."

PECO's partners at Peach Bottom, Public Service Electric & Gas Company, Atlantic City Electric Company, and Delmarva Power & Light Company, sued PECO for breaching the Owner Agreement. PECO agreed to pay \$130,985,000 to resolve the litigation.

-Although PECO may be competent to operate its own Boiling Water Reactors, it has no experience in operating a Pressurized Water Reactor (like TMI-1).

-The sale of TMI to AmerGen would violate the Atomic Energy Act which precludes transferring nuclear technology to a foreign entity.

-In the first eight months of 1998, "PECO has cut its dividend nearly in half, announced 1,200 job cuts, and written off \$3.1 billion in assets." (*Patriot News*, Business, September 3, 1998.)

Historic and fiscal trends are valid and instructive barometers of future performance. PECO Energy has demonstrated an operating arrogance unmatched by any Pennsylvania utility. Rather than acquiring aging nuclear reactors, PECO should put its own financial house in order, marshal its resources toward improved performance, and make a concerted effort to reduce their electric and gas rates. •

**Ex-owners of Pennsylvania Uranium Plant Ordered to Pay \$36.5 Million**

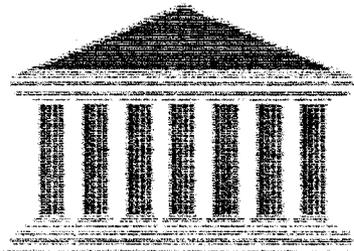
*from a September 18, 1998, Star Tribune (Minneapolis, MN) article*

The owners of a uranium plant that fueled submarines during the Cold War were ordered by a jury on Thursday to pay at least \$36.5 million to eight cancer-stricken residents of the small town of Apollo, Pa., or their relatives. Atlantic Richfield Co. and Babcock and Wilcox Co. were found negligent in their operation of the now-closed Nuclear Materials and Equipment Corp. plant.

Nearly 100 of the 1,900 residents of the river town, about 30 miles northeast of Pittsburgh, have claimed that three decades of radiation from the plant have caused an unusually high incidence of cancer. The jury deliberated nine days before awarding \$36.5 million in compensatory damages.

"Yes!" exulted Patricia Ameno, an Apollo resident who was among the first to suggest a link between the plant and the cancer that struck her and her neighbors.

Only eight cases of cancer were addressed in the monthlong federal trial. The damages will be divided among seven cancer patients, three of their spouses, and the parents of a woman who died of leukemia. The other plaintiffs, including Ameno, have filed separate lawsuits that are still pending.



The plant processed nuclear fuel from 1957-86 and was torn down in the early 1990s. It once supplied uranium to power U.S. submarines.

When she heard the verdict, Jennifer Marks Kettering, 26 - who has leukemia - cried, shook and lowered her head. She was awarded \$2.82 million.

The largest payment, \$8.5 million, will go to the estate of Tina Hall, who died of leukemia at age 24 on Christmas 1992.

The companies had argued that the plaintiffs failed to prove the plant exceeded allowable releases of radiation, show any increased likelihood of cancer after purported releases or provide any estimates of radiation doses that residents received. The companies cited two state Health Department studies that showed no unusual rates of cancer in Apollo.

The plaintiffs disputed the Health Department studies. Dr. James Melius, an occupational and public health specialist, testified that the department should have compared the incidence of cancer near the plant with rates in surrounding rural areas, rather than with national and state rates. •

**NRC Suspends SALP Program Until Review of Performance Assessment Process Is Completed**

*from a September 16, 1998, NRC press release*

The Nuclear Regulatory Commission has suspended its Systematic Assessment of Licensee Performance (SALP) program for an interim period until the NRC staff completes a review of its nuclear power plant performance assessment process. At the end of the process, the Commission will decide whether to resume the SALP program or substitute something regarded as more effective.

The decision to suspend SALP is part of a larger plan to improve NRC's regulatory effectiveness. The plan represents a consolidation, refinement and acceleration of a set of ongoing initiatives in the following areas: reactor licensee performance assessment; risk-informed, performance-based regulations; reactor inspection and enforcement; licensing activities; NRC's organizational structure; and a number of specific issues requiring prompt and sound decisions.

L. Joseph Callan, NRC's Executive Director of Operations, outlined the plan in a recent memorandum to NRC Chairman Shirley Ann Jackson.

Resources saved by suspending the SALP program will be used to accelerate the staff's effort to redesign its regulatory practices to reflect in a more timely and efficient manner the performance of a mature nuclear industry. The NRC staff will make recommendations to the Commission at the conclusion of the review early next

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# NRC Auditing Nuclear Power Plant Year 2000 Readiness Programs

*from a September 21, 1998, NRC press release*

As part of its efforts to address the Year 2000 problem, the Nuclear Regulatory Commission has begun a series of audits that will examine 12 nuclear power plants throughout the nation to spot-check measures licensees are taking to assure that key computer systems will function in the year 2000 and beyond.

The process, which will extend through January, started this month with audits at the Monticello nuclear power plant in Minnesota and the Seabrook plant in New Hampshire. Other plants will be audited as follows:

October: Brunswick (North Carolina), Hope Creek (New Jersey) and Davis Besse (Ohio).

November: Wolf Creek (Kansas), Watts Bar (Tennessee), and Limerick (Pennsylvania).

December: Waterford (Louisiana).

January: North Anna (Virginia), Braidwood (Illinois), and WNP-2 (Washington State).

Results of the audits will be used to determine if NRC needs to take further regulatory action. Based on preliminary findings during early audits or other relevant emerging information, NRC may need to adjust these schedules and may consider conducting audits at other plants.

The NRC selected plants for the Year 2000 audit based primarily on the following criteria:

- Three plants located in each of NRC's four regions;
- Plants designed by all four vendors (Babcock & Wilcox, General Electric, Combustion Engineering, and Westinghouse);
- Plants of different ages; and
- Extent of use of computer systems in plants.

The "Year 2000" problem refers to computers' potential inability to recognize 21st Century dates beginning with January 1, 2000, and beyond. It is caused by computer programs that use two-digit numbers to represent a calendar year (such as "98" for 1998). If the problem is not corrected, vulnerable computer systems will read "00" as 1900, rather than 2000, possibly causing some plant systems or equipment to malfunction.

Thus far, NRC has no indication that such computer-related problems exist with safety-related systems in nuclear power plants. "Year 2000" problems have been found in non-safety, but nevertheless important computer-based applications, such as security computers, control room display systems, engineering programs, control systems, radiation

monitoring, and emergency response.

In January, the NRC issued a letter to all licensed utilities with operational nuclear power plants requiring that they inform the NRC of steps they have taken or will take to deal with the Year 2000 problem. All licensees have responded that they are implementing programs designed to assure that computer systems will operate effectively into the 21st Century. All have indicated they will follow a program similar to the NRC-endorsed industry guide for Year 2000 readiness programs.

By July 1, 1999, licensees must submit a written response confirming that their plants are or will be Year 2000 ready at the turn of the century and if not, must provide a status report, including completion schedules for work remaining to ensure Year 2000 readiness.

More information about the Year 2000 problem can be found at the NRC Internet web page at: <http://www.nrc.gov/NRC/NEWS/year2000.html>.

Details about the NRC audit plan can be found at: <http://www.nrc.gov/NRC/Y2k/y2kaudit.html>.

# Three Mile Island Vulnerable to Terrorists

from a September 10, 1998, Three Mile Island Alert press release

Despite the installation of 14 vehicle barriers at the Three Mile Island Generating Station following a 1993 intrusion, TMI is not adequately protected from truck bomb attacks. The current vehicle setback distances from vital areas of the plant are so small that a large truck bomb detonated from outside the barriers could trigger a disaster. While recent terrorists threats and security precautions at other US installations have prompted an increase of security measures to unprecedented level, security at TMI remains less than adequate.

Since 1994, Three Mile Island Alert has been requesting that the Nuclear Regulatory Commission correct this problem. Scott D. Portzline, Security Committee Chairman for TMIA, documented the security gaps in a presentation to the NRC's Independent Advisory Committee on Reactor Safeguards in 1994. His map of the plant plots a path to a specific area where the layout of the buildings would actually focus a bomb blast onto the vulnerable target.

More specifically, because the North Entrance vehicle barrier is open 50 percent of the day, a pathway exists whereby a terrorist could quickly and easily drive a truck bomb to within 75 feet of an especially vulnerable and dangerous target (the exact location is considered safeguarded information). Detonating a bomb from this spot could create a

tremendous radioactive release, even larger than that of a full scale reactor accident.

According to Portzline, "The NRC and GPU have ignored this problem in spite of a 1984 classified report which concludes that a truck bomb can cause a disaster from outside the protected area."

Three Mile Island is the second smallest plant in the country. Following bombings linked to the Osama bin Laden organization, the US military has requested setbacks of 300 feet at its own installations for protection from large truck bombs. Although the NRC has stated that some small plants need to install blast deflection shields to protect vulnerable area, TMI has not installed these shields and the NRC is not enforcing the guideline.

Osama bin Laden funded the terrorists who bombed the World Trade Center. These terrorists trained only 30 miles from TMI. They threatened to attack "nuclear targets" with "150 suicide soldiers" and performed a night-time mock assault on an electrical substation near the training camp. As recently as September 4, 1998, the State Department considered bin Laden a continuing threat to the US and recommended that extra security precautions be taken.

Although the NRC recently issued a safeguarded communiqué to nuclear plants, entitled "Threat Assessments

and Consideration of Heightened Physical Protection Measures," the NRC described the communiqué as only a "suggestion." According to Portzline, "Although the NRC is aware of the threats and the need for better protection, they are not enforcing the rules which are already on their books."

Three Mile Island Alert is urging that TMI and the NRC take immediate corrective action regarding this matter of national security. •

*(Continued from "SALP," page 9)*  
year.

SALP evaluations were conducted by regional and headquarters NRC staff every 12 to 24 months to assess performance of each licensed nuclear power plant. The SALP program has been in existence for almost 20 years.

During the interim period that the SALP program is suspended, the NRC will utilize the results of its plant performance reviews to provide nuclear power plant performance information to licensees, state and local officials, and the public. These reviews are intended to identify performance trends since the previous assessment and make any appropriate changes to the NRC's inspection plans. Since beginning the Plant Performance Review process in 1988, the NRC has continuously improved it to the point that these reviews now use similar information and address many of the objectives of the SALP program. As a result, licensee performance will be assessed in much the same way as in the SALP process, and on a more frequent basis. •

**Compact Supports Suspending LLRW Siting Process**

*from a June 19, 1998, DEP Update article*

Members of the Appalachian States Low-level Radioactive Waste Compact Commission on June 18 unanimously approved a resolution supporting DEP's proposal to suspend the siting process for a low-level radioactive waste disposal facility.

Earlier this month the department announced it would be exploring the possibility of suspending the process based on the ready availability of disposal capacity to Pennsylvania generators of low-level waste at Chem-Nuclear's disposal facility in Barnwell, South Carolina.

The commission decided it would meet again in December to hear a report on the outcome of DEP's negotiations with Chem-Nuclear Systems, Pennsylvania's contractor for the siting process.

Pennsylvania joined Delaware, West Virginia and Maryland in 1985 to form the Appalachian States Low-level Radioactive Waste Compact. It was agreed that the compact's site would be located in Pennsylvania since the state generates about 85 percent of the compact's low-level waste.

The commission indicated that it expects DEP to resolve the contract in a manner that would assure resumption of the siting process if the need arose or if the availability of disposal ceased for any reason.

**42 of The Nation's Nuclear Reactors Are Not Competitive**

*from an April 22, 1998, Critical Mass Energy Project press release*

Forty-two nuclear reactors are more expensive to operate and maintain than the cost of replacement power in their own regions, reports a study released today by Public Citizen's Critical Mass Energy Project.

Owned and operated by 28 utilities in 21 states, these 42 nuclear reactors are among the least competitive in the United States. "If deregulation is really about competition, at least 42 nuclear reactors should be shut down as the industry is restructured," said Wenonah Hauter, Director of Public Citizen's Critical Mass Energy Project. "These non-competitive nuclear reactors should be retired and replaced with clean, safe and renewable sources of electricity."

"The threat is that in an effort to cut costs, nuclear utilities will cut corners on safety and increase the risk of an accident," said James Riccio, Staff Attorney for Public Citizen's Critical Mass Energy Project and author of the report. "Economic pressure on aging nuclear reactors in a deregulated electricity market could be a recipe for disaster."

"The lives of aging nuclear reactors should not be prolonged by multi-billion dollar bailouts of nuclear utilities," said Hauter. "The bailout of California's nuclear reactors under the guise of deregulation should be a warning to utility customers across the

country." "Even if nuclear utilities can bring operation and maintenance costs under control, the combination of cheap replacement power and the rapid aging of reactors will likely doom many of these nuclear plants long before the expiration of their licenses," Riccio concluded.

Based on a 1994 study conducted by the Edison Electric Institute (EEI), Public Citizen's analysis compares operation and maintenance costs to the price of replacement power for each nuclear reactor over a three-year period, 1994-1996. The results of the 1994 Edison study were so abysmal that the report was never released.

Judging from the results below (see chart on page 13), EEI's reluctance to release the comparisons is understandable. Public Citizen's analysis indicates that 42 nuclear reactors from 28 utilities were more expensive to operate & maintain than the cost of replacement power in their own regions.

Reactor Site	State	O&M 1994-1996 Mills/KWH*	Replacement Power Costs Mills/KWH	Margin
Maine Yankee	ME	212.45	26.6	185.85
Millstone-1&2	CT	132.42	23.2	109.22
Big Rock Point-1	MI	61.18	23.7	37.48
Salem-1&2	NJ	49.3	23.5	25.8
Perry-1	OH	36.87	11.9	24.97
Indian Point-3	NY	53.36	31.4	21.96
Fort Calhoun-1	NE	30.55	9.7	20.85
Millstone-3	CT	41.91	23.4	18.51
Fermi-2	MI	36.01	18.6	17.41
River Bend-1	LA	28.95	11.7	17.25
Cooper Station	NE	28.56	11.9	16.66
Clinton-1	IL	23.93	9.3	14.63
Dresden-2&3	IL	42.08	29	13.08
Duane Arnold	IA	23.42	10.8	12.62
Sequoyah-1&2	TN	19.66	7.7	11.96
Browns Ferry-2&3	AL	18.92	7.6	11.32
Oyster Creek-1	NJ	31.71	22.4	9.31
Haddam Neck	CT	31.05	21.9	9.15
Cook-1&2	MI	19.91	12.3	7.61
Quad Cities-1&2	IL	32.6	25.4	7.2
<b>Beaver Valley-1&amp;2</b>	<b>PA</b>	<b>20.92</b>	<b>14.1</b>	<b>6.82</b>
Davis-Besse-1	OH	20.28	13.5	6.78
Monticello	MN	17.12	12.4	4.72
Grand Gulf-1	MS	16.47	12.2	4.27
Pilgrim-1	MA	28.72	25.4	3.32
Callaway-1	MO	15.08	13.2	1.88
Waterford-3	LA	17.18	15.4	1.78
Hatch-1&2	GA	19.76	18.4	1.36
Wash. Nuclear-2	WA	19.62	18.5	1.12
Prairie Island-1&2	MN	13.53	12.6	0.93
Arkansas-1&2	AR	15.56	15.3	0.26

\* One mill is equivalent to one-tenth of one cent. Public Citizen is a consumer advocacy organization founded by Ralph Nader in 1971. Copies of Questioning the Authority may be purchased for \$40 by calling Public Citizen's publications department at 202-588-1000.

## **NRC Issues \$55,000 Civil Penalty Against PECO for Violations Involving Ineffective Valve Repairs at Limerick**

*from a July 8, 1998, NRC Press Release*

The Nuclear Regulatory Commission has proposed a \$55,000 fine against PECO Energy Company for violations of agency requirements involving equipment operability at the Limerick nuclear power plant. PECO owns and operates the twin-reactor facility, which is located in the Philadelphia suburb of Limerick, Pa.

Identified during NRC inspections conducted between October 20, 1997, and March 16 of this year, the violations were discussed during a predecisional enforcement conference held on June 10 at the NRC Region I office in King of Prussia, Pa.

One of the infractions involves PECO's failure to aggressively and comprehensively fix a Unit 2 valve that was experiencing difficulties. Part of the high-pressure coolant injection (HPCI) system -- one of the plant's emergency core cooling systems -- the exhaust valve failed to close during testing on five occasions between March 1994 and January 1998.

Despite efforts to fix the problem, ineffective corrective action led to the valve being inoperable for an extended period of time.

"Although the valve does not have an automatic isolation function, it is necessary to isolate HPCI system leakage and is considered an extension of the (plant's) containment boundary," NRC

Region I Administrator Hubert J. Miller wrote in a letter to PECO notifying it of the enforcement action. "In each of the first four occurrences, root cause analyses were not adequate to detect the root cause of the problem. Of particular concern is the fact that after the fifth failure on January 8, 1998, the valve was not declared inoperable even though subsequent data revealed internal binding of the valve."

Another violation was a failure to effectively troubleshoot a problem affecting a Unit 2 residual heat removal system valve. One function of the residual heat removal system is to maintain water level in the reactor vessel following a loss-of-coolant accident. Part of that system is a minimum flow valve, which is designed to open when a residual heat removal pump is in operation with the system's flow at low levels in order to prevent pump damage.

However, between Sept. 1, 1997, and Jan. 21, 1998, PECO efforts to prevent recurrent failures of the valve proved ineffective. The valve was not declared inoperable even though it was found closed four times, with the flow at less than the required 1,500 gallons per minute, during that period.

"The NRC considers this violation significant since pump damage could occur under no flow conditions in as little as three minutes. The NRC is particularly

concerned that similar to the issue concerning the high-pressure coolant injection system exhaust valve, this problem revealed a lack of comprehensive troubleshooting by the engineering staff, as well as improper acceptance by the operators that the pump was operable even though the cause of the problem was not identified," Mr. Miller said.

The two violations have been categorized in the aggregate as a Severity Level III problem. (The NRC issues four levels of violations, ranging from Level I, which is the most significant, to Level IV, which is the least significant.) A fine of \$55,000 is being issued for those infractions.

In addition, the NRC cited, but did not fine, PECO for a Level IV violation. It pertained to a failure to promptly identify and correct a misinstalled bearing in one of the plant's emergency diesel generators.

PECO has 30 days to pay the fine or to request in writing that all or part of the penalty be withdrawn. •

### Buried Nuclear Waste 'Can Escape Through Plant Roots'

from an August 27, 1998 AAP Newsfeed article

Buried nuclear waste can escape to the surface by climbing up the roots of plants, it was claimed today. The discovery was made by accident during experiments with radioactive waste in America, New Scientist magazine reported. And Nirex, the British nuclear waste agency, had discovered the same phenomenon in tests in the UK, the magazine said.

Researchers at Oak Ridge National Laboratory in Tennessee embedded resin contaminated during the Three Mile Island

nuclear accident in 1979 in small capsules of cement and polystyrene. These were then buried at the bottom of 90 cm deep steel cylinders filled with sand. The aim was to test whether radioactivity from buried waste could leach through the soil.

Eight years ago contamination was detected on the surface of one of the sand-filled cylinders. At the time scientists thought it was due to a spillage, but now a lengthy investigation has concluded that the radioactive material came from

the buried waste.

William Sanford, of Colorado State University, who led the study, thinks the radioactive particles were probably carried upwards in water absorbed naturally by the roots of tiny plants.

The particles traveled about 20 cm a year and took five years to reach the surface. Sanford said: "This could result in direct exposures and off-site releases from underground storage facilities."



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The official registration and financial information for Three Mile Island Alert may be obtained from the PA Department of State by calling toll free, within PA, 1-800-732-0999. Registration does not imply endorsement.

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