

The banner features a dark blue background. On the left side, there is a grayscale photograph of several large, white, conical containment domes. To the right of the image, the text "THREE MILE ISLAND" is written in white, all-caps, sans-serif font. Below this, the word "ALERT" is written in a larger, bold, yellow, all-caps, sans-serif font.

THREE MILE ISLAND ALERT

January 14, 2025
Submitted by Eric J. Epstein

In, July, 1969, Met-Ed broke ground for Three Mile Island-2. (“TMI-2”) The plant was also designed by Babcock & Wilcox (900 mw), and came on line in December, 1978. TMI-2 was five years behind schedule, and the price tag more than tripled from \$206 million to \$700 million.

TMI-2 was on line for 90 days (or 1/120 of its expected operating life) at the time of the meltdown. Three months of nuclear power production at TMI-2 has cost over \$2.7 billion dollars in construction (\$700 million), defueling (\$1 billion), and cleanup bills (\$1 billion).

TMI-2 is owned by TMI-2 Solutions, a limited liability corporation organized in Delaware, based in Utah, and a wholly owned subsidiary of Energy Solutions. This corporate gimmick owns Three Mile Island Unit-2, and controlled nearly \$1 billion in ratepayer decommissioning funds. Tri Artisan, which is a privately held equity company based in New York, owns Energy Solutions. Tri Artisan’s shares are owned by investors from outside of the nuclear industry such as Sara

Lee Desserts and TGI Fridays, and 28% of the company is owned by foreign investors.

The initial and only National Pollutant Discharge Elimination System (“NPDES”) permit issued in 1977 was explicitly referred to as an “interim agreement. Based on publicly available submissions, TMI-2 did not submit Clean Water Act, Section 401 Certification documents. This document was not submitted as part of the Application from Energy Solutions and GPU Nuclear, Order Approving and Conforming License Amendments, Three Mile Island Unit, NRC Docket, 50-320, November 12, 2019. Those documents were also addressed and shared with the DEP. The TMI-2 license transfer application purportedly covered environmental compliance under “Environmental Laws” and “Environmental Matters under 4.9.” In addition, under Schedule 4.19.1, there was no discussion of the Clean Water Act, Section 401, Water Quality Certification (“WQC”).

The final rule became effective on September 11, 2020. A license modification and transfer at Three Mile Island Unit-2 should not have occurred without a documented waiver or other documentation from the Certifying Authority - either the Department of Environmental Protection (“DEP”) or the Susquehanna River Basin Commission (“SRBC) stating that Section the 401 Certification does not apply to the changes in

license conditions at Three Mile Island. The rule was modified to address deficiencies in the nuclear oversight and regulatory omissions. The revised CWA rule specifically provides for state oversight as a safety valve to prevent pollution.

Question, #1: Why did the DEP decline to provide a waiver?

Question, #2: TMI-1 will have to file for an NPDES permit. How can the public participate?

Question, #3: Will TMI-1's NPDES permit include TMI-2?

In June 1980, the Susquehanna Valley Alliance filed a Complaint and Injunction with the Middle District Court in Harrisburg, Pennsylvania against the Nuclear Regulatory Commission and Metropolitan Edison. The Injunction sought to prevent the owner and operator of Three Mile Island from dumping 700,000 gallons of radioactive water into the Susquehanna River. The Injunction was granted, and the NRC was found to be in violation of the National Environmental Policy Act.

Question, #4: How does DEP monitor radioactive discharges?

TMI's operators – with management's knowledge - had been falsifying primary-coolant leak rates prior to the Accident. On February 29, 1984, Met Ed settled the leak rate falsification case with the Department of Justice. The owners

of Three Mile Island were the first nuclear operator to be convicted of a felony for violating the Atomic Energy Act.

In 1992, General Public Utilities (“GPU”) maintained that the damaged reactor would be placed in Post-Defueling Monitored Storage until the end of operations at TMI-1 in 2034. The plan was to decommission TMI-1 and TMI-2 at the same time. General Public Utilities owned both units. However, this changed in 1998 when Exelon (then Amer Gen Energy) bought TMI-1 for \$99 million.

The defueling of TMI-2 concluded in 1993. The plant was placed into Post-Defueled Monitored Storage. The first dry shielded canister containing Unit 2 core debris was moved to the Idaho National Laboratory in March,1999. Each dry shielded canister contained 12 TMI Unit 2 canisters. There are a total of 29 dry shielded canisters on-site.

On April 7, 2011, the NRC issued a report to the U.S. Department of Energy about problems with the deterioration of the concrete at the horizontal storage modules. The modules were constructed in 1999 and were designed for a 50-year service life.

Question, #5: Does the Department of Energy’s “agreement to take possession of any TMI-2 fuel bearing material mean” the waste will be shipped of TMI; and if not, will TMI-2 Solutions be paid by the

DOE to store the waste on site?

TMI-2 was removed from Post-Defueling Monitoring Storage in 2023, despite objections from TMI-Alert that the Decommissioning Trust Fund (“DTF”) as underfunded, and the cleanup plan was based on undocumented speculation. The completion of decommissioning of TMI-2 is scheduled for 2037, and Site Restoration is projected to be achieved by 2054.

Unit-2 has a dedicated decommissioning fund even though it only operated for three months, and the meltdown occurred before the decommissioning accounts were created in Pennsylvania.

The license application stated the cost to decommission would be \$1.06 billion (2019 dollars) and be completed by 2037. In a March, 2020 report to the NRC, FirstEnergy subsidiary GPU Nuclear said the trust fund had about \$899 million, while the estimated clean-up costs were \$1.3 billion. On March 28, 2024 the Fund had \$784 million. It appears only \$554,000 million is left.

The TMI-2 Application states, “Although TMI-2 Solutions will pursue an accelerated Decommissioning schedule after acquiring TMI-2, as demonstrated in Enclosure 7, the NDT [Nuclear Decommissioning Trust] will still provide sufficient funding for decommissioning, accounting for fund growth up through 2037. Moreover, the Purchase Agreement does not prevent TMI-2 Solutions from deferring active Decommissioning work, if necessary, to preserve or grow NDT funds.”

The NRC staff provided an opportunity for members of the public to ask question of the NRC staff on the topics discussed in the public portion of meeting. Mr. Rich Jantai, representing the Pennsylvania Department of Environmental Health and Safety, commented on the 3-year gap that would be shown in the update to the PSDAR that is scheduled to be submitted at the end of March 2024. He indicated that he was concerned about what would be accomplished regarding decommissioning during this period, including the available decommissioning trust fund, as well as how ES would be able to maintain staff during this period. The NRC responded that it would evaluate the update when it is submitted. (NRC, February 29, 2024.)

On October 4, 2024, a Response to the second set of the NRC’s

Request for Additional Information, staff noted that TMI-2 Solutions “provided greater clarity regarding work schedules, proposed work activity...” and “adequately explain how a skilled work force will be maintained or obtained when transitioning from Phase 1 to Phase 2 activities. (NRC, Three Mile Island Unit-2 Post-Shutdown Decommissioning Activities Report, Rev. 6.)

Question, #6: Can the DEP provide a copy of the PSDAR update?

Question, #7: How much is in the Decommissioning Trust Fund ?

Question, #8: When will the cleanup be paused, where will the workers go, and when will the cleanup resume?

TMI-1 is planning on reopening in 2028 when the TMI-2 cleanup resumes. The restart involves significant site construction and intense industrial applications.

Question, #9: If Peach Bottom 1’s cleanup was delayed due to the activities involving a small reactor, how will TMI-2 cleanup a much larger reactor?

In February, 2023, the Company told the Atomic Safety and Licensing Board that Energy Solutions would be using Constellation’s (“Independent Spent Fuel Storage

Installation (“ISIFI” the ISIFT at TMI-1 to store 9 casks of high-level radioactive waste. Energy Solutions back tracked, and now wants to build an additional ISIFI next to TMI-1.

Question, #10: Who is paying for the ISIFI for TMI-2, and how much will it cost?

Unit 2 has no rights to withdraw water from the Susquehanna River. In addition, TMI-2 has no water infrastructure or intakes, and would have to construct a water line or install storage tanks for water use. Water use at Three Mile Island is clouded by history, and poor regulatory coordination.

Water use at Three Mile Island (“TMI”) is regulated by the Susquehanna River Basin Commission (“the Commission” or “SRBC”). Three Mile Island Unit-1 (“TMI-1”) was shut down in September of 2019, and its permission for water use expired in October of 2021. Since the core melt accident at Three Mile Island Unit-2 (“TMI-2”), that reactor has been permanently shut down.

Based on the SRBC’s Order on December 15, 2022, TMI-1 no longer has access to enough water to operate a nuclear power plant. Unit 2 has no rights to withdraw water. In addition, TMI-2 has no water infrastructure or intakes, and would have to construct a water line or install storage tanks for a water supply. Water use at Three Mile Island is

complicated by the fact that ownership is split between two separate licenses.

TMI-Alert raised concerns throughout the SRBC Proceeding, and supported the modification in TMI's permit that added Paragraph 24 to the Order. This stipulation allows for a minimal withdrawal of groundwater from TMI-1 to TMI-2 to be capped. Any modification to increase water use for TMI-1 or TMI-2 would require a new proceeding. The SRBC does not monitor radioactive water discharges.

1) TMI-2 has no access, contract or water infrastructure;

2) There is no contract between Constellation and TMI-2 Solutions to convey water; and,

3) TMI-2 Solutions will not be able to access water for the TMI-2 cleanup until after TMI-1's decommissioning is completed in 2079.

Further clouding the issue, TMI-2 Solutions said they would need 100,000 gallons per day to cleanup TMI-2 on April 29, 2021. However, in court documents filed on February 13, 2023, TMI-2 Solutions said it would need 500,000 gallons per day to complete the cleanup of the damaged reactor.

Question, #11: How and where will the five-fold increase in water that TMI-2 has no rights to be obtained and transported?

