



# Three Mile Island

---

## Where We Stand Today

---



---

**GPU**

**1**

*This is the first in a series of issue papers brought to you by the shareholders of the General Public Utilities Corporation.*

---

Two years after the March 28, 1979 accident at Three Mile Island Unit 2, cleanup activities are continuing as GPU tackles the unprecedented challenges posed by the accident.

The massive cleanup effort has been hampered by a complex knot of technological, environmental, procedural and regulatory difficulties stemming from the accident, including:

- Contaminated Water
- Radioactive Gasses
- Damaged Reactor Core
- Waste Disposal
- Financing

In the more than 750 days since the accident much has been done by GPU nuclear engineers to solve the problems, but a long, difficult path remains before the cleanup chore is completed.

Let's take a look at the accomplishments to date:

### **Water Cleaned**

Approximately 575,000 gallons of water containing intermediate levels of contamination have been processed by a \$5 million water purification system called EPICOR II. Similar to a home water softener, EPICOR II removes radioactive material from the water. The decontaminated water is being stored in four tanks on the island until plans are approved by the Nuclear Regulatory Commission for its ultimate disposition.

The resins used to remove the radioactivity from the water are being temporarily stored at TMI.

---

## Gas Dispersement

From June 28 to July 11, 1980 radioactive Krypton 85 gas was released to the atmosphere from the TM 1-2 containment building-the building housing the damaged reactor. The releases were well below acceptable radiation limits permitted by the NRC for the venting operation.

Releasing the gas, which was approved after extensive review by the NRC, was a prelude to sending engineers and technicians into the reactor building to get a first-hand analysis of the overall cleanup needs. Several teams have entered the building since the first entry last July. Prior to each entry



---

small amounts of krypton gas have been released. The amount of krypton vented neither harms the environment nor poses a threat to public safety.

## **Replacement Power**

With both the damaged TMI-2 and the undamaged TMI-1 units out of service, GPU has been purchasing large blocks of power from other utilities to replace power lost from the TMI complex.

Keeping an eye on costs, GPU subsidiaries are buying coal-fired power where

possible from sources in the mid-west, New York and Canada. Replacement power is costing customers about \$27 million a month. Restoring the undamaged TMI-1 to service, as other similarly designed plants have been, would cut monthly power purchases by about \$14 million. Restart hearings on TMI-1 are currently underway. GPU expects the earliest the plant could be operational would be late this year.

*-Where do we go from here?*

## **Clean and Remove Reactor Building Water**

Clearly the most pressing problem facing the cleanup is the approximately 600,000 gallons of highly radioactive water in the basement of the containment building. This is the water that passed through the reactor and escaped through the faulty relief valve during the accident.

---

---

Until the water is removed and a support building is constructed, cleanup crews cannot begin the time-consuming task of scrubbing and mopping the contaminated surfaces in the containment building.

GPU is currently completing construction of an \$8 million Submerged Demineralized System (SDS) similar to a very sophisticated water softening system, to clean the water.

As with the water processed by EPICOR II, the decontaminated containment building water will be temporarily stored in two 500,000 gallon stainless steel water tanks constructed on the island at a cost of \$1.7 million.

## **Removing Damaged Reactor Core**

This is the final step necessary to remove the threat to public health and safety.

Currently GPU estimates the inspection and removal of the damaged fuel core may take place in mid to late 1985. Detailed planning and engineering work for removal of the core are underway. Without question the knowledge gained from the core's removal will provide the nuclear industry with invaluable information.

## **Waste Disposal**

Contaminated waste products like rags, clothing and other materials used to decontaminate the auxiliary building have been shipped for storage to the Hanford disposal site in Richland, Washington.

---

---

Beginning July 1, 1981 the state of Washington will no longer permit out-of-state use of that facility if a voter initiative passed last year is permitted to stand. The industry plans on challenging the legality of the initiative. Low level waste disposal will continue to be a serious problem for the industry, as well as TMI, until additional sites are made available.

Although the decontaminated water poses no threat to the public's health or safety, GPU will continue working with federal and state officials on an acceptable means for disposal.

## **Financing**

The cost of the cleanup is staggering. Current projections estimate it will cost more than \$1 billion. Further regulatory delays will continue to add to the final figure.

Insurance coverage will cover the first \$300 million in damages. Since the accident GPU has used about two thirds of this amount. Because regulatory delays have slowed the pace of the cleanup, GPU anticipates the insurance coverage may stretch through 1982. This, of course, can change depending on the regulatory response in the months ahead.

As for the remainder of the cleanup costs, GPU is working on a broadbase support of the parties involved to help with the massive financial undertaking.

Initially the cleanup was estimated to cost about \$400 million. Continued regulatory

---

---

delays, which have slowed the pace of the cleanup, a better understanding of the extent of the technical effort, and inflation have increased the cost to the current \$1 billion level.

As a customer of the GPU System or as an interested party, we want to keep you informed of the issues and progress at Three Mile Island. Although customers are not paying for any of the cleanup costs, they are paying higher electric bills since GPU has had to buy power to replace that normally supplied by TMI.

GPU's objective is to cleanup TMI-2 and restore the undamaged TMI-1 to service as soon as possible. GPU believes timely action on both projects will be significant factors in helping to control customer electric bills.

---



**General Public Utilities**  
*100 Interpace Parkway*  
*Parsippany, N.J. 07054*