Testimony of Eric Epstein
Re: Three Mile Island, Unit 2, (TMI-2) Post-Shutdown Decommissioning Activities Report (PSDAR)

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August 28, 2013

I. Introduction

Within two years after submitting the certification of permanent closure to the NRC,* nuclear power plants are required to file a post-shutdown decommissioning activities report ("PSDAR"). GPU Nuclear Inc., ("GPU") the plant's owner, neglected to do that by the required date of September 14, 1995. On February 13, 2013 , over seventeen years after the Report was due and thirty years after GPU caused a meltdown, the NRC decided to give TMI-2 the benefit of the doubt. The NRC stated, "...after reviewing the circumstances for the company's failure to submit a PSDAR." the NRC downgraded the Severity Level III violation to a slap on the wrist and issued a non-cited notice of violation.

This is like being awarded a Ph.D. for flunking out of first grade.

Thank goodness the NRC is not a probation officer.

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* US, Nuclear Regulatory Commission, Three Mile Island - Unit 2, License No.: DPR-73 Docket No.: 50-320, License Status: Possession Only License.

http://www.nrc.gov/info-finder/decommissioning/power-reactor/three-mile-island-unit-2.html.

A PSDAR provides a description of the planned decommissioning activities, a schedule for accomplishing them and an estimate of the expected costs. However, Exelon, the owner and operator of TMI Unit 1, has an agreement with FirstEnergy to maintain and monitor TMI Unit 2.*

The core problem with the PSDAR is that the same people are making the same estimates using the same assumption and they have consistently underestimated the up costs to decommission and decontamination TMI-2.

The new, revised schedule for decommissioning of TMI-2 has been developed in order to achieve the termination of license by September 14, **2053 or 84 year after construction began, 74 years after the plan was melted down and sixty years after TMI-2 announced defueling** was completed and future decommissioning coasts would be $200 million.

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* **"**Consistent with a signed memorandum of understanding between FirstEnergy Corp. (parent of GPUN) and Exelon regarding the timing of decommissioning activities at TMI-2, it is assumed that decommissioning at TMI-2 will not begin until the expiration of the TMI-1 operating license in 2034 and will be coordinated with post-shutdown activities for TMI-1. For the purpose of this cost estimate the integration of site security and the final site radiological survey between the two units is assumed." (PSDAR, p. 13)

The fact that the plant suffered a meltdown makes it "unique]e" as does the fact that Three Mile Island is owned by two separate and competing corporations.

"There are no unique aspects of TMI-2 or of the decommissioning techniques to be utilized that would invalidate the conclusions reached in the PEIS, and the GElS and its supplement. (PSDAR, p. 24)

II. Background

In July, 1969 Met Ed began construction on Three Mile Island-2 Unit 2, and the station came on line in December 1978. TMI-2 was grossly over budget and behind schedule. The plant had been on-line for just 90 days, or 1/120 of its expected operating life, before the March, 1979, accident. One billion dollars was spent to defuel the facility. Three months of nuclear power production at TMI-2 has cost close to $2 billion dollars in construction and cleanup bills; or the equivalent of over $10.6 million for every day TMI-2 produced electricity.

The above mentioned costs do not include nuclear decontamination and decommissioning or restoring the site to "Greenfield. TMI-2 had no funds socked away at the time of meltdown for decontamination or decommissioning.

At the time of the core-meltdown in March 1979, Three Mile Island 1 and 2 were owned three utilities operating in two states, i.e., Metropolitan Edison (50%), Jersey Central Power & Light (25%) and Pennsylvania Electric (25%). The companies were organized under the General Public Utilities holding company umbrella. The operator of both plants was Met Ed.

In September, 1980, Met Ed renamed itself GPU Nuclear. Met Ed continued to operate the plant and owned 50% of its assets.

On January 18, 1994 at the NRC's Advisory Panel meeting, GPU's President Robert E. Long stated that the Company had $104.7 million on hand to decommission TMI-2**. GPU's spokesperson, Mary Wells said, "We have a detailed plan in place to make sure that the money is going to be there."** 3

On September 20, 1995, the Pennsylvania Supreme Court reversed a lower court's decision, and sided with GPU in allowing the Company to charge rate payers for the TMI-2 accident. One billion - pooled from rate payers, taxpayers and insurance accompanies - had been spent to defuel the plant, which now lays in idle shutdown, i.e., Post-Defueling Monitored Storage.

GPU represented to the Public Utility Commission during the 1993 Base Rate proceedings that the estimated decommissioning costs for TMI-2 was approximately $200 million. In 1995, GPUN hired a consultant to conduct a site specific decommissioning study for TMI.

By February 1998 (in 1997 dollars), the new, revised estimates were $399 million for radiological decommissioning and an additional$34 million for non radiological costs. The projected "target" funding floor off $433 million doubled the estimated cost prepared in 1993. (General Public Utilities, 1997 Annual Report, p.52.)

On July 21, 1999, GPU Nuclear received permission form the NRC to reduce the insurance at TMI-2 from $1.06 billion to $50 million. Later in the year, TMI-1's license was transferred from GPU Nuclear to AmerGen on December 20, 1999, and GPU contracted with AmerGen to maintain a skeletal staff presence at TMI-2.

On August 9, 2000, FirstEnergy and GPU announced a planned merger. FENOC acquired GPU for approximately $4.5 billion.

In November, 2001, TMI-2 was formally transferred from GPU Nuclear to FirstEnergy. GPU Nuclear retains the license for TMI-2 and is owned by FirstEnergy Nuclear Operating Company.

In 2006, according to the NRC, the radiological decommissioning cost estimate was $779 million and another $26 million would be required for non-radiological decommissioning. The amount in the decommissioning trust fund was $559 million as of December 31, 2006 or **$246 million below the minimal amount needed to clean the plant up.**

The TMI-2 site summary at the NRC's website posted: "The current radiological decommissioning cost estimate is $805 million and $27 million for non-radiological funds. The current amount in the decommissioning trust fund is $601 million, as of December 31, 2007."

And in 2008, according to the NRC, the radiological decommissioning cost estimate for TMI-2 was $831.5 million. The amount in the decommissioning trust fund was $484.5 million as of December 31, 2008. The cost to decommission TMI-2 has increased by $26.5 million in less than three years while FirstEnergy decommissioning trust fund's assets has decreased by $116.5 million during the same period. (1)

The planned decommissioning date was pushed back from 2014 to 2036 based on the relicensing of TMI-1.

TMI-2 has changed names and ownership three times since the accident. The one constant is the inability to accurately "predict" when the plant will be cleaned up, how much it will cost and who be left paying for the bailout.

III. Argument

The Company anticipates that the nuclear generating stations will operate at least until the end of their current licensed lives. In the event that any of the stations are retired early, the Company anticipates that funding will be adjusted to match any change in decommissioning schedule and/or cost scenario.

According to the NRC, (2) FirstEnergy's Decommissioning Trust Fund for TMI-2 was grossly underfunded in 2008: "The current radiological decommissioning cost estimate is $831.5 million. The current amount in the decommissioning trust fund is $484.5 million, as of December 31, 2008." (3) However, the level of rate recovery for the Trust Fund has been set by the Pennsylvania Public Utility Commission ("PUC").

FirstEnergy's decommissioning report is inadequate, and fails to account for the special status of TMI-2, the current level of underfunding, or the fact that decommissioning rate recovery for Metropolitan Edison (4) and Pennsylvania Electric cease per PUC Orders on December 31, 2010. (5)

> The decommissioning trusts of JCP&L and the Pennsylvania Companies are subject to regulatory accounting, with unrealized gains and losses recorded as regulatory assets or liabilities, since the difference between investments held in trust and the decommissioning liabilities will be recovered from or refunded to customers. NGC, OE and TE recognize in earnings the unrealized losses on available-for-sale securities held in their nuclear decommissioning trusts as other-than-temporary impairments.

The Company acknowledged, “The values of FirstEnergy’s nuclear decommissioning trusts fluctuate based on market conditions. If the value of the trusts decline by a material amount, FirstEnergy’s obligation to fund the trusts may increase. Disruptions in the capital markets and its effects on particular businesses and the economy in general also affects the values of the nuclear decommissioning trusts.” (6)

However, FirstEnergy’s rate recovery opportunities in Pennsylvania are restricted after December 31, 2010. **Three Mile Island Unit-2 no longer receive rate payer funding for decommissioning after December 31, 2010 when Metropolitan Edison and Penn Elec’s “rate caps” were lifted.**

This is a settled issue at the Pennsylvania Public Utility Commission. (7) TMI-2’s decommissioning funding was litigated in both Met Ed and Penn Elec’s Restructuring Cases as well as the 2006 distribution base rate case at the PUC. As part of the Restructuring Settlement, Met Ed and Penn Elec collected TMI-2 decommissioning expenses through the Competitive Transition Cost (“CTC”) as a stranded cost through December 31, 2010.

In the 2006 Distribution base rate case; however, Met Ed sought an increase in the TMI-2 decommissioning expense as part of its CTC revenue requirement. The claim was made as part of a request for a specific exception to the generation rate cap that was allowed under the restructuring settlement. (8) The Pennsylvania Public Commission denied the request. (9)

Long-standing Atomic Energy Commission and Nuclear Regulatory Commission precedent makes it clear that “once a regulation is adopted, the standards it embodies represent the Commission definition of what is required to protect the public health and safety." (10)

FirstEnergy has acknowledged the embedded uncertainty and historic variability associated with “nuclear generation involves risks that include uncertainties relating to health and safety, additional capital costs, the adequacy of insurance coverage and nuclear plant decommissioning.” (11) **The Company’s statement is underscored by the inability of TMI-2’s management to predict decommissioning costs or funding levels over the past 230 years.**

The owners of Three Mile Island Unit-2 promised the NRC that delaying the cleanup would decrease cost and increase safety. Frank Standerfer GPU vice-president and director of TMI-2 told the NRC**, “If we wait [to decommission TMI-2] there would be less risk to our workers and it would be more cost effective. He also told the NRC’s TMI Advisory Panel, “GPU will not have a problem finding funds to shut both reactors in the next century.”** (12)

On July 23, 2012, in response to an NRC Request for Additional Information, GPU provided data that reflected a site specific Decommissioning Study for Three Mile Island Unit 2 dated January 2009, and escalated to 2011 dollars:

Radiological	**$884,551,275**
Non-Radiological	**$33,5765,579**
Consolidated	**$918,127,854**

* Please note that the **PSDAR p. 15 does not reflect non-radiological costs to cleanup TMI-2 dollars.**

FirstEnergy should provide the NRC with site-specific information and financial guarantees that demonstrate and verify the licensee has 100% of the funding in place necessary to decommission and decontaminate TMI-2.

The NRC can not ignore or manipulate its own regulations relating to financial assurances for decommissioning.

After 35 years of broken promises, faulty assumptions, and inaccurate projections, the NRC should hold FirstEnergy accountable and demand a site-specific funding plan at the site of the nation's worst commercial nuclear accident.

End notes

1 NRC website: http://www.nrc.gov/info-finder/decommissioning/power-reactor/three-mile-island-unit-2.html.

According to the NRC, the cost to decommission TMI-2 has **increased by $26.5 million in less than three years** while the Decommissioning Trust Fund's assets have **decreased by $116.5 million** during the same period. The NRC determined in 2007, "The current radiological decommissioning cost estimate is $805 million and $27 million for non-radiological funds. The current amount in the decommissioning trust fund is $601 million, as of December 31, 2007." (2)

2 NRC website: http://www.nrc.gov/info-finder/decommissioning/power-reactor/three-mile-island-unit-2.html.

3 Per 10 CFR 50.75(f)(1), licensees for shutdown reactors are required to report annually on the status of decommissioning funding by March 31 (in the following year).

4 Metropolitan Edison (Docket No. R-00974008) and Penn Electric (Docket No. R-00974009).

5 Penn Elec's final TMI-2 collection for $7.817 million occurred in 2009.

6 *FirstEnergy 2009 Annual Report,* p. 44.

7 *FirstEnergy 2009 Annual Report*, p. 59.

8 Metropolitan Edison and Pennsylvania Electric Company v. Pa. PUC No. 2404 C.D. 2003 (Pa. Cmwlth. 2006) (filed July 19, 2006).

9 The Commonwealth Court affirmed the Commission's order requiring Metropolitan Edison and Pennsylvania Electric Company (Electric Companies) to retroactively adjust their accounting entries for stranded cost recovery, as if their Settlement Stipulation had never been approved by the Commission. The Electricity Generation Customer Choice and Competition Act (Competition Act) allowed electric companies to recover stranded costs through a competitive transition charge (CTC), subject to a rate cap. Every electric company was also required to file a restructuring plan explaining its compliance with the Competition Act, subject to approval by the Commission. After the Commission approved the Electric Companies' merger, they sought a rate increase pursuant to the Competition Act, or an immediate rate cap increase of $316 million per year. Interveners opposed the merger and Electric Companies' requests. The parties failed to reach a consensus, and the Electric Companies proposed a "Settlement Stipulation," which the Commission adopted in 2001. However, Commonwealth Court voided the Stipulation Settlement and reversed the Commission's order in *ARIPPA v. Pa. PUC*, 892 A.2d 636 (Pa. Cmwlth. 2002) after multiple parties appealed. In response to the decision, the Commission ordered the Electric Companies to reverse any accounting changes made pursuant to the Settlement Stipulation.

10 Vermont Yankee Nuclear Power Station), United Sates of America Atomic Energy Commission Atomic Safety & Licensing Appeal Board, Memorandum and Order, (ALAB-138) Docket No. 50-271, IV., p. 528, Section IV, Paragraph A., p. 528, July 31, 1973.

11 *FirstEnergy 2009 Annual Report*, p. 17.

12 Transcript from the NRC's TMI-2 Citizens Advisory Panel convened on May 27, 1988 in Harrisburg, PA.