

Three Mile Island Unit 1  
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Middletown, PA 17057

Telephone 717-948-8000

November 20, 2011

TMI-11-161

10 CFR 50.73

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

THREE MILE ISLAND NUCLEAR STATION, UNIT 1 (TMI-1)  
OPERATING LICENSE NO. DPR-50  
DOCKET NO. 50-289

SUBJECT: LICENSEE EVENT REPORT (LER) NO. 2011-001-00  
"Unanalyzed Condition Affecting Probable Maximum Flood (PMF) Level"

This report is submitted in accordance with 10 CFR 50.73 (a)(2)(ii)(B). For additional information regarding this LER contact David Atherholt, Manager TMI Unit 1 Regulatory Assurance at (717) 948-8364.

There are no regulatory commitments contained in this LER.

Sincerely,



Glen Earl Chick  
Site Vice President, Three Mile Island Unit 1  
Exelon Generation Co., LLC

GEC/mdf

cc: TMI Senior Resident Inspector  
Administrator, Region I  
TMI-1 Senior Project Manager

JE22  
NRK

**LICENSEE EVENT REPORT (LER)**

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

<b>1. FACILITY NAME</b> Three Mile Island, Unit 1	<b>2. DOCKET NUMBER</b> 05000289	<b>3. PAGE</b> 1 OF 3
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**4. TITLE:** Unanalyzed Condition Affecting Probable Maximum Flood (PMF) Level

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
09	26	2011	2011	- 001 -	00	11	20	2011	N/A	05000
									FACILITY NAME	DOCKET NUMBER
									N/A	05000

<b>9. OPERATING MODE</b>  N	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFRs:</b> (Check all that apply)			
<b>10. POWER LEVEL</b>  100	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input checked="" type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER	
<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A	

**12. LICENSEE CONTACT FOR THIS LER**

<b>FACILITY NAME</b> David Atherholt, Manager TMI Unit 1 Regulatory Assurance	<b>TELEPHONE NUMBER (Include Area Code)</b> (717) 948-8364
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**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
D				N					

<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	<b>15. EXPECTED SUBMISSION DATE</b>	MONTH	DAY	YEAR

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)**

On September 26, 2011, an analysis titled "River Stage Discharge and Discharge Frequency Analysis" was completed. The analysis predicts the water level at the TMI-1 Intake Structure Pump House (ISPH) at the peak flow during a Probable Maximum Flood (PMF) will be 4.3 feet higher than the previous analysis. The new analysis predicts a PMF water level at 313.3 feet at the ISPH. The flood barrier system currently protects TMI Unit 1 for river levels up to 313.5 feet elevation. Because the original flood barrier system protected TMI Unit 1 for river levels up to 311 feet, if the PMF had occurred prior to September 2011, the event had the potential to adversely affect plant safety. No actual flooding occurred. The validity of the flood analysis had not been re-assessed due to the lack of a programmatic requirement to perform periodic re-assessments of the external flood hazard. A repetitive task will be instituted to periodically re-assess the external flood hazard.

**LICENSEE EVENT REPORT (LER)**

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**A. EVENT DESCRIPTION**

Plant Conditions before the event:

Babcock & Wilcox – Pressurized Water Reactor – 2568 MWth Core Power  
 Date/Time: September 26, 2011/1400 hours  
 Power Level: 100% steady state power  
 Mode: Power Operations

There were no structures, systems, or components out of service that contributed to this event.

Event:

On September 26, 2011, an analysis titled “River Stage Discharge and Discharge Frequency Analysis” was completed. The analysis predicts the water level at the TMI-1 Intake Structure Pump House (ISPH) \*[MD] at the peak flow during a Probable Maximum Flood (PMF) will be 4.3 feet higher than the previous analysis. The new analysis predicts a PMF water level at 313.3 feet at the ISPH. The flood barrier system currently protects TMI Unit 1 for river levels up to 313.5 feet elevation. Because the original flood barrier system protected TMI Unit 1 for river levels up to 311 feet, if the PMF had occurred prior to September 2011, the event had the potential to adversely affect plant safety. No actual flooding occurred.

**B. CAUSE OF EVENT**

The validity of the flood analysis had not been re-assessed due to the lack of a programmatic requirement to perform periodic re-assessments of the external flood hazard.

**C. ANALYSIS / SAFETY SIGNIFICANCE**

On September 26, 2011, the completion of a new analysis revealed that the PMF elevation had increased from 309 feet elevation to 313.3 feet elevation. Based on the updated analysis, the TMI Unit-1 flood protection systems did not satisfy the licensing commitment for flood protection, prior to a modification made to the flood barrier system in September 2011. This constituted an unanalyzed condition with the potential to exceed the PMF design basis and adversely impact plant safety.

Since no actual flooding occurred, this event did not adversely affect the health and safety of plant personnel or the general public.

**D. CORRECTIVE ACTIONS**

The corrective action is to institute a repetitive task to periodically re-assess the external flood hazard.

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**E. PREVIOUS OCCURENCES**

A review of previous reportable events within the last three years did not identify any events that directly translate to the TMI Unit 1 circumstance. No additional operating experience was found where the flood hazard had been re-analyzed and the results were unexpected, or where the lack of revised analysis was a recognized deficiency.

\* Energy Industry Identification System (EIIS), System Identification (SI) and Component Function Identification (CFI) Codes are included in brackets, [SI/CFI] where applicable, as required by 10 CFR 50.73 (b)(2)(ii)(F).