



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
2100 RENAISSANCE BLVD.  
KING OF PRUSSIA, PA 19406-2713**

April 19, 2017

Mr. Bryan Hanson  
Senior Vice President, Exelon Generation, LLC  
President and Chief Nuclear Officer, Exelon Nuclear  
4300 Winfield Rd.  
Warrenville, IL 60555

**SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT 1 - EVALUATED EMERGENCY  
PREPAREDNESS EXERCISE – INSPECTION REPORT NO. 05000289/2017502**

Dear Mr. Hanson:

On April 14, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the April 11, 2017, evaluated emergency preparedness exercise at the Three Mile Island (TMI), Unit 1 facility. The enclosed inspection report documents the inspection results, which were discussed on April 13, 2017, with Mr. Ed Callan, Site Vice President, and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records component of the NRC's document system, Agencywide Documents Access and Management System (ADAMS).

ADAMS is accessible from the NRC's Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Raymond McKinley, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket No. 50-289  
License No. DPR-50

Enclosure:  
NRC Inspection Report No. 05000289/2017502

cc w/encl: Distribution via ListServ  
R. Flinn, Director, PA Emergency Management Agency (PEMA)  
T. Scardino, RAC Chair, FEMA Region III

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT 1 - EVALUATED EMERGENCY  
 PREPAREDNESS EXERCISE – INSPECTION REPORT NO. 05000289/2017502  
 DATED APRIL 19, 2017

DISTRIBUTION w/encl:

DDorman, RA  
 DLew, DRA  
 MScott, DRP  
 DPelton, DRP  
 RLorson, DRS  
 JYerokun, DRS  
 SKennedy, DRP

SShaffer, DRP  
 MHenrion, DRP  
 BLin, DRP, RI  
 DWerkheiser, SRI  
 ADiaz, DRP, AA  
 EBurket, DRS  
 RMcKinley, DRS

JBowen, RI, OEDO  
 RidsNrrPMThreeMileIsland  
 Resource  
 RidsNrrDorlLp1-2 Resource  
 ROPReports Resource

DOCUMENT NAME: G:\DRS\Plant Support Branch 1\EP INSPECTIONS\BASELINE\2017\TMI EP EX 17\TMI  
 EP EX 2017 Report.docx ADAMS ACCESSION NUMBER: ML17111A599

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DRS	RI/DRP	RI/DRS		
NAME	EBurket/EB	SKennedy/S. Shaffer for	RMcKinley/RMcK		
DATE	4/18/17	4/18/17	4/19/17		

**OFFICIAL RECORD COPY**

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION I**

Docket No.: 50-289

License No.: DPR-50

Report No.: 05000289/2017502

Licensee: Exelon Generation Company

Facility: Three Mile Island Nuclear Station, Unit 1

Location: Middletown, Pennsylvania

Dates: April 10-14, 2017

Inspectors: E. Burket, Acting Senior Emergency Preparedness Inspector  
Division of Reactor Safety (DRS)  
J. DeBoer, Emergency Preparedness Inspector  
S. LaVie, Senior Emergency Preparedness Specialist  
D. Silk, Senior Operations Inspector

Approved By: Raymond McKinley, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Enclosure

**SUMMARY**

IR 05000289/2017502; 4/10/2017 - 4/14/2017; Three Mile Island Nuclear Station Unit 1; Exercise Evaluation - Scenario Review - Performance Indicator Review.

This was an announced inspection conducted by three Region I-based inspectors and one headquarters-based inspector. No findings were identified during the inspection.

The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

No findings were identified.

## REPORT DETAILS

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

#### 1EP1 Exercise Evaluation – (71114.01 – 1 Sample)

##### a. Inspection Scope

On April 11, 2017, Exelon conducted a biennial Three Mile Island (TMI) emergency preparedness (EP) exercise. The inspectors evaluated the adequacy of Exelon's conduct of the exercise, the performance of the TMI emergency response organization (ERO) to respond to the simulated emergency, and Exelon's capability to assess their own staff performance via a formal critique process, as required by Title 10 of the *Code of Federal Regulations* (CFR) 50.47(b)(14).

The exercise evaluation consisted of the following review and assessment:

- The adequacy of Exelon's performance in the biennial full-participation exercise regarding the implementation of the risk significant planning standards described in 10 CFR 50.47(b)(4), (5), (9), and (10), which are: emergency classification; offsite notification; radiological assessment; and public protective action recommendations, respectively.
- The overall adequacy of Exelon's Three Mile Island emergency response facilities (ERF) with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities," and Emergency Plan commitments. The ERFs assessed were: the Control Room Simulator, the Technical Support Center, and the Emergency Operations Facility.
- A review of other performance areas, such as: Exelon ERO's recognition of abnormal plant conditions; command and control; intra- and inter-facility communications; prioritization of mitigating activities; utilization of repair and field monitoring teams; interface with offsite agencies; staffing and procedure adequacy; and the overall implementation of the emergency plan and its implementing procedures.
- A review of past performance issues from Exelon's EP drill reports to determine the effectiveness of licensee corrective actions as demonstrated during the April 11, 2017, exercise and to ensure compliance with 10 CFR 50.47(b)(14).
- A review of the licensee's post-exercise critiques, to evaluate Exelon's self-assessment of its ERO performance during the April 11, 2017, exercise and to ensure compliance with 10 CFR Part 50, Appendix E, Section IV.F.2.g.

The inspectors reviewed the documents listed in the attachment to this report.

##### b. Findings

No findings were identified.

**1EP8 Exercise Evaluation – Scenario Review (71114.08 – 1 Sample)****a. Inspection Scope**

Prior to the April 11, 2017, emergency preparedness exercise, the NRC inspectors conducted an in-office review of the exercise objectives and scenario, which Exelon had submitted to the NRC, to determine if the exercise would test major elements of the Three Mile Island Emergency Plan as required by 10 CFR 50.47(b)(14).

The inspectors reviewed the documents listed in the attachment to this report.

**b. Findings**

No findings were identified.

**4. OTHER ACTIVITIES (OA)****4OA1 Performance Indicator Verification (71151 – 3 Samples)****a. Inspection Scope**

The inspectors reviewed data for the TMI EP Performance Indicators (PI), which are: (1) Drill and Exercise Performance; (2) ERO Drill Participation; and, (3) Alert and Notification System Reliability. The last NRC EP inspection at TMI was conducted in the first calendar quarter of 2016, therefore, the inspectors reviewed supporting documentation from EP drills and equipment tests from the first calendar quarter of 2016 through the first calendar quarter of 2017, to verify the accuracy of the reported PI data. The review of these PIs was conducted in accordance with NRC Inspection Procedure 71151, using the acceptance criteria documented in NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 7.

**b. Findings**

No findings were identified.

**4OA6 Meetings, including Exit**

On April 13, 2017, the inspectors presented the results of this inspection to Ed Callan, TMI Site Vice President, and other members of the Exelon staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

**ATTACHMENT  
SUPPLEMENTAL INFORMATION  
KEY POINTS OF CONTACT**

Licensee Personnel

E. Callan, Site Vice President  
V. Cwietniewicz, Exelon Mid-Atlantic Emergency Preparedness Manager  
J. Pickett, Emergency Preparedness Manager

**LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

None.

**LIST OF DOCUMENTS REVIEWED**

Section 1EP1: Exercise Evaluation

Procedures

EP-AA-1000, Exelon Nuclear Standardized Emergency Plan, Revision 28  
EP-AA-1009, Three Mile Island Generating Station Emergency Plan Annex, Revision 24  
EP-AA-1009, Addendum 3, Emergency Action Levels for Three Mile Island Station, Revision 2  
OS-24, Conduct of Operations During Abnormal and Emergency Events, Revision 29

Miscellaneous

Three Mile Island Nuclear Station 2017 Emergency Preparedness Biennial Exercise Scenario Package, dated 2/8/2017

Issue Reports

2492831	2650903	3961835	3962418
2492841	2667729	3961843	3962799
2492887	2668296	3961872	3963805
2525298	2694088	3961911	3969910
2525373	3961831	3962160	

Section 1EP8: Exercise Evaluation – Scenario Review

Procedures

EP-AA-1000, Exelon Nuclear Standardized Emergency Plan, Revision 28  
EP-AA-1009, Three Mile Island Generating Station Emergency Plan Annex, Revision 24  
EP-AA-1009, Addendum 3, Emergency Action Levels for Three Mile Island Station, Revision 2

Miscellaneous

Three Mile Island Nuclear Station 2017 Emergency Preparedness Biennial Exercise Scenario Package, dated 2/8/2017



Section 40A1: Performance Indicator (PI) Verification

Procedures

EP-AA-125-1001, EP Performance Indicator Guidance, Revision 9  
EP-AA-125-1002, ERO Performance – Performance Indicators Guidance, Revision 12  
EP-AA-125-1003, ERO Readiness – Performance Indicators Guidance, Revision 11  
EP-AA-125-1004, Emergency Response Facilities and Equipment Performance Indicators Guidance, Revision 10  
Drill/Exercise Performance PI data, January 2016 – March 2017  
ERO Drill Participation PI data, January 2016 – March 2017  
Alert and Notification System Reliability PI data, January 2016 – March 2017

Issue Reports

2656353  
2659725

**LIST OF ACRONYMS**

ADAMS	Agencywide Documents Access and Management System
CFR	<i>Code of Federal Regulations</i>
EP	Emergency Preparedness
ERF	Emergency Response Facility
ERO	Emergency Response Organization
NRC	Nuclear Regulatory Commission
PI	Performance Indicator
TMI	Three Mile Island