



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I**  
2100 RENAISSANCE BOULEVARD  
KING OF PRUSSIA, PENNSYLVANIA 19406

May 27, 2015

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

SUBJECT: THREE MILE ISLAND STATION, UNIT 1 – NRC EVALUATED EMERGENCY  
PREPAREDNESS EXERCISE – INSPECTION REPORT NO.  
05000289/2015502

Dear Mr. Hanson:

On April 16, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the April 14, 2015, evaluated emergency preparedness exercise at your Three Mile Island, Unit 1 (TMI) facility. The enclosed inspection report documents the inspection results, which were discussed on April 16, 2015, with Mr. T. Haaf, TMI Plant Manager, 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* (10 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 Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system, Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Anthony Dimitriadis, Chief  
Plant Support Branch 1  
Division of Reactor Safety

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

Mr. Bryan Hanson  
 Senior Vice President, Exelon Generation  
 President and Chief Nuclear Officer, Exelon Nuclear  
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/RA/

Anthony Dimitriadis, Chief  
 Plant Support Branch 1  
 Division of Reactor Safety

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

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Enclosure:

NRC Inspection Report No. 05000289/2015502

cc w/encl: Distribution via ListServ

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T. Scardino, RAC Chair, FEMA Region III

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION I**

Docket No.: 50-289

License No.: DPR-50

Report No.: 05000289/2015502

Licensee: Exelon Generation Company

Facility: Three Mile Island Station (TMI), Unit 1

Location: Middletown, Pennsylvania

Dates: April 13-16, 2015

Inspectors: S. Barr, Sr. Emergency Preparedness Inspector, Division of Reactor Safety (DRS), Region I (Lead)  
E. Burket, Emergency Preparedness Inspector, DRS, Region I  
D. Werkheiser, Senior Resident Inspector, TMI, Division of Reactor Projects (DRP), Region I  
B. Fuller, Senior Operations Inspector, DRS, Region I  
B. Dionne, Health Physicist, DRS, Region I  
D. Everhart, Physical Security Inspector, DRS, Region I  
J. Bream, Physical Security Inspector, DRS, Region I (Observer)  
S. Horvitz, Project Engineer, DRP, Region I (Observer)

Approved By: Anthony Dimitriadis, Chief  
Plant Support Branch 1  
Division of Reactor Safety

## **SUMMARY**

IR 05000289/2015502; 4/13/2015 - 4/17/2015; Exelon Generation Company, LLC; Three Mile Island, Unit 1; Exercise Evaluation - Scenario Review - Performance Indicator Review.

This was an announced inspection conducted by five Region I-based inspectors and one senior resident 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 5.

No findings were identified.

## REPORT DETAILS

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP7 Exercise Evaluation – (71114.07 – 1 Sample)

#### a. Inspection Scope

On April 14, 2015, Exelon conducted a biennial Three Mile Island EP exercise. The inspectors evaluated the adequacy of the licensee's conduct of the exercise, the performance of the Exelon emergency response organization 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). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

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; onsite protective actions; and public protective action recommendations, respectively.
- The overall adequacy of Exelon's emergency response facilities (ERF) with regard to Emergency Plan commitments. The ERFs assessed were: the Control Room Simulator, the Technical Support Center (TSC), the Emergency Operations Facility (EOF), and the Joint Information Center (JIC).
- A review of other performance areas, such as: the licensee emergency response organization's (ERO) 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 the last NRC TMI exercise inspection report and Exelon's EP drill reports, to determine the effectiveness of licensee corrective actions as demonstrated during the April 14, 2015, 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 14, 2015, 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.

Enclosure

b. Findings

No findings were identified.

1EP8 Exercise Evaluation – Scenario Review (71114.08 – 1 Sample)

a. Inspection Scope

Prior to the April 14, 2015, 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). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

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 (DEP); (2) ERO Drill Participation; and, (3) ANS Reliability. The last EP inspection at TMI was conducted in the first calendar quarter of 2014, so the inspectors reviewed supporting documentation from EP drills and tests from the first calendar quarter of 2014 through the first calendar quarter of 2015, 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 6.

This inspection activity represented the completion of three samples.

b. Findings

No findings were identified.



4OA6 Meetings, including Exit

On April 16, 2015, the inspectors presented the results of this inspection to Mr. T. Haaf, TMI Plant Manager, 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**

T. Haaf, TMI Plant Manager

V. Cwietniewicz, Exelon Mid-Atlantic Emergency Planning Manager

B. Shumaker, TMI Emergency Planning Manager

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

None.

**LIST OF DOCUMENTS REVIEWED**

**Section 1EP1: Exercise Evaluation**

EP-AA-1000, Exelon Nuclear Standardized Emergency Plan (Revision 26)

EP-AA-1009, Three Mile Island Generating Station Emergency Plan Annex (Revision 24)

Three Mile Island Emergency Plan Implementing Procedures

Three Mile Island April 14, 2015, Emergency Exercise Scenario Package

Three Mile Island Emergency Preparedness Drill Reports, January 2014 - March 2015

Condition Reports generated as a result of the April 14, 2015, exercise (As documented in TMI 2015 Graded Exercise Evaluation Report, dated May 11, 2015)

**Section 1EP8: Exercise Evaluation – Scenario Review**

EP-AA-1000, Exelon Nuclear Standardized Emergency Plan (Revision 26)

EP-AA-1009, Three Mile Island Generating Station Emergency Plan Annex (Revision 24)

Three Mile Island April 14, 2015, Emergency Exercise Scenario Package

**Section 4OA1: Performance Indicator (PI) Verification**

LS-AA-2110, Monthly Data Elements for NRC Emergency Response Organization (ERO) Drill Participation (Revision 6)

LS-AA-2120, Monthly Data Elements for NRC Drill/Exercise Performance (Revision 4)

LS-AA-2130, Monthly Data Elements for NRC Alert and Notification System (ANS) Reliability (Revision 5)

EP-AA-125-1001, EP Performance Indicator Guidance (Revision 7)

DEP PI data, January 2014 – March 2015

ERO Drill Participation PI data, January 2014 – March 2015

ANS Reliability PI data, January 2014 – March 2015

**LIST OF ACRONYMS**

ADAMS	Agencywide Documents Access and Management System
ANS	Alert Notification System
AR	Action Request
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERF	Emergency Response Facility
ERO	Emergency Response Organization
JIC	Joint Information Center
NRC	Nuclear Regulatory Commission
PAR	Protective Action Recommendation
PI	Performance Indicator
TMI	Three Mile Island
TSC	Technical Support Center