



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

May 24, 2011

Mr. Michael J. Pacilio  
Senior Vice President, Exelon Generation Company, LLC  
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.  
05000289/2011502

Dear Mr. Pacilio:

On April 14, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the April 12, 2011, 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 14, 2011, with Mr. Richard Libra, 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 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 (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

A handwritten signature in black ink that reads "Jm Trapp".

James M. Trapp, Chief  
Plant Support Branch 1  
Division of Reactor Safety

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

Enclosure: NRC Inspection Report 05000289/2011502

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/RA/

James M. Trapp, Chief  
 Plant Support Branch 1  
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SUNSI Review Complete: JMT (Reviewer's Initials) ADAMS ACC #ML11450137

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M. Pacilio

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No: 05000289

License No: DPR-50

Report No: 05000289/2011502

Licensee: Exelon Generation Company, LLC (Exelon)

Facility: Three Mile Island Station, Unit 1

Location: P.O. Box 480  
Middletown, PA 17057

Dates: April 11-14, 2011

Inspectors: S. Barr, Sr. Emergency Preparedness Inspector, DRS, Region I (Lead)  
D. Silk, Sr. Operations Engineer, DRS, Region I  
D. Kern, Sr. Resident Inspector –TMI, DRP, Region I  
D. Lawyer, Health Physicist, DNMS, Region I  
C. Crisden, Emergency Preparedness Inspector, DRS, Region I  
K. Cronk, Project Engineer, DRP, Region I (Observer)  
C. Williams, Reactor Engineer, DRS, Region I (Observer)

Approved By: James M. Trapp, Chief  
Plant Support Branch 1  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000289/2011502; 04/11/2011-04/14/2011; Three Mile Island, Unit 1; Emergency Preparedness Exercise Report.

This was an announced inspection conducted by four region-based inspectors and one resident inspector. No findings were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6, dated December 2006.

### **Cornerstone: Emergency Preparedness**

No findings were identified.

## REPORT DETAILS

### 1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

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

##### a. Inspection Scope

Prior to the April 12, 2011, 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 (TMI) 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 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 (RSPS) described in 10 CFR 50.47(b)(4), (5), (9), and (10), which are: emergency classification; offsite notification; radiological assessment; and protective action recommendations, respectively.
- The overall adequacy of Exelon's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities," and Emergency Plan commitments. The facilities assessed were the Control Room Simulator, Operations Support Center (OSC), Technical Support Center (TSC), Emergency Operations Facility (EOF), and Joint Information Center (JIC).
- A review of other performance areas, such as: the TMI emergency response organization's (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 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 12, 2011, exercise and to ensure compliance with 10 CFR 50.47(b)(14).
- The licensee's post-exercise critiques, to evaluate Exelon's self-assessment of its ERO performance during the April 12, 2011, exercise and to ensure compliance with 10 CFR 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.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes (71114.04 – 1 Sample)

a. Inspection Scope

Since the last NRC inspection of this program area, Exelon implemented Revision 16 of the TMI Emergency Plan Annex. Exelon had determined that in accordance with 10 CFR 50.54(q), any change made to the Plan had not resulted in any decrease in effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. The inspectors reviewed all EAL changes made since March 2010, and conducted a sampling review of other Emergency Plan changes, including changes to lower-tier emergency plan implementing procedures, to evaluate for any potential decreases in effectiveness of the Emergency Plan. However, this review was not documented in an NRC Safety Evaluation Report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator (PI) Verification (71151 – 3 Samples)

a. Inspection Scope

The inspectors reviewed data for the TMI EP PIs, which are: (1) Drill and Exercise Performance (DEP); (2) Emergency Response Organization (ERO) Drill Participation; and, (3) Alert and Notification System (ANS) Reliability. The last EP inspection at TMI was conducted in the first quarter of 2010, so the inspectors reviewed supporting documentation from EP drills, training records, and equipment tests from the first calendar quarter of 2010 through the fourth quarter of 2010, 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 on an annual cycle.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On April 14, 2011, the inspectors presented the results of this inspection to Mr. R. Libra, the TMI Plant Manager, and other members of the Exelon staff. No proprietary information was provided to the inspectors during this inspection.



**ATTACHMENT**

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

**Licensee Personnel**

W. Noll, TMI Site Vice President

V. Cwietniewicz, Exelon Mid-Atlantic Emergency Planning Manager

D. Neff, 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 20)

EP-AA-1009, Three Mile Island Generating Station Emergency Plan Annex (Revision 17)

Three Mile Island Emergency Plan Implementing Procedures

Three Mile Island April 12, 2011, Emergency Exercise Scenario Package

Three Mile Island Emergency Preparedness Drill Reports, January 2010 – March 2011

Condition Reports generated as a result of the April 12, 2011, exercise (As documented in TMI 2011 Graded Exercise Evaluation Report, dated May 9, 2011)

**Section 1EP4: Emergency Action Level and Emergency Plan Changes**

EP-AA-1000, Exelon Nuclear Standardized Emergency Plan (Revision 20)

EP-AA-1009, Three Mile Island Generating Station Emergency Plan Annex (Revision 17)

EP-AA-120, Emergency Plan Administration (Revision 13)

EP-AA-120-1001, 10 CFR 50.54(q) Change Evaluation (Revision 6)

LS-AA-104, Exelon 50.59 Review Process (Revision 6)

Emergency Plan Change Packages:

10-08, 10-35, 10-46, 10-119, 10-129, 10-146, 11-17

**Section 4OA1: Performance Indicator Verification**

EP-AA-125-1001, EP Performance Indicator Guidance (Revision 6)

Alert Notification System PI data, January 2010 – December 2010

DEP PI data, January 2010 – December 2010

ERO Drill Participation PI data, January 2010 – December 2010

**LIST OF ACRONYMS**

ANS	Alert Notification System
CR	Condition Report
DEP	Drill and Exercise Performance
EAL	Emergency Action Level
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
JIC	Joint Information Center
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standard
TMI	Three Mile Island
TSC	Technical Support Center