



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

December 18, 2009

Mr. Charles G. Pardee
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Rd
Warrenville, IL 60555

SUBJECT: LIMERICK GENERATING STATION – NRC EVALUATED EMERGENCY
PREPAREDNESS EXERCISE – INSPECTION REPORT NOS.
05000352/2009502 AND 05000353/2009502

Dear Mr. Pardee:

On November 20, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the November 17, 2009, evaluated emergency preparedness exercise at your Limerick Generating Station. The enclosed inspection report documents the inspection results, which were discussed on November 20, 2009, with Mr. C. Mudrick 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 of significance 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 cursive script, appearing to read "James A. Trapp".

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

Docket Nos. 50-352, 50-353
License Nos. NPF-39, NPF-85

Enclosure: NRC Inspection Report Nos. 05000352/2009502 and 05000353/2009502

cc w/Encl: Distribution via ListServ

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/RA/

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SUNSI Review Complete: JMT (Reviewer's Initials) ADAMS ACC #ML093550003

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DATE	12/17/09	12/17/09	12/18/09					

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 05000352, 05000353

License No.: NPF-39, NPF-85

Report No.: 05000352/2009502, 05000353/2009502

Licensee: Exelon Generation Company, LLC

Facility: Limerick Generating Station, Units 1 & 2

Location: Sanatoga, PA 19464

Dates: November 11-20, 2009

Inspectors: S. Barr, Senior Emergency Preparedness Inspector, DRS, Region I (Lead)
R. Rolph, Health Physicist, DRS, Region I
C. Crisden, Emergency Preparedness Inspector, DRS, Region I
B. Fuller, Operations Engineer, DRP, Region I
E. Bonney, Reactor Engineer, DRS, Region I

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

SUMMARY OF FINDINGS

IR 05000352/2009502, 05000353/2009502; 11/16/2009 – 11/20/2009; Limerick Generating Station; Exercise Evaluation; Emergency Action Level and Emergency Plan Changes; Emergency Preparedness Performance Indicators.

This was an announced inspection conducted by five region-based inspectors. No findings of significance 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 4, dated December 2006.

Cornerstone: Emergency Preparedness

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Findings

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP1 Exercise Evaluation (71114.01 – 1 Sample)

a. Inspection Scope

Prior to the November 17, 2009, 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 Limerick 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 Limerick 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 Limerick 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 Limerick exercise inspection report and Exelon's Limerick EP drill reports, to determine the effectiveness of licensee corrective actions as demonstrated during the November 17, 2009, 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 November 17, 2009, exercise and to ensure compliance with 10 CFR 50, Appendix E, Section IV.F.2.g.

- A review of the Federal Emergency Management Agency (FEMA) observations of the involved offsite response organizations' performance during the exercise, including any FEMA deviations or areas requiring corrective action. The inspectors attended the FEMA public exit meeting conducted on November 20, 2009, in Reading, PA.

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

b. Findings

No findings of significance 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, in March 2009, Exelon implemented various revisions of the different sections of the Limerick Emergency Plan. Exelon had determined that, in accordance with 10 CFR 50.54(q), any change made to the Plan, and its lower-tier implementing procedures, 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 that had been made since March 2009, and conducted a sampling review of other Emergency Plan changes, including the 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 of significance were identified.

4. **OTHER ACTIVITIES (OA)**

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

a. Inspection Scope

The inspectors reviewed data for the Limerick 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 NRC EP inspection at Limerick was conducted in the first quarter of 2009, so the inspectors reviewed supporting documentation from EP drills, training records, and equipment tests from the first calendar quarter of 2009 through the third quarter of 2009, 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 of significance were identified.

4OA6 Meetings, Including Exit

On November 20, 2009, the inspectors presented the results of this inspection to Mr. C. Mudrick, Site Vice President, 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

C. Mudrick, Site Vice President
V. Cwietniewicz, Exelon Mid-Atlantic Emergency Preparedness Manager
K. Ferich, Limerick Emergency Planning Manager
M. Crim, Limerick Emergency Preparedness Coordinator

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 19)
EP-AA-1008, Limerick Generating Station Emergency Plan Annex (Revision 16)
Limerick Emergency Plan Implementing Procedures
Limerick November 17, 2009, Emergency Exercise Scenario Package
Limerick Emergency Preparedness Drill Reports, January 2008 – October 2009
Condition Reports generated as a result of the November 17, 2009, exercise (As documented in LGS 2009 Graded Exercise Evaluation Report, dated December 16, 2009)

Section 1EP4: Emergency Action Level and Emergency Plan Changes

EP-AA-1000, Exelon Nuclear Standardized Emergency Plan (Revision 19)
EP-AA-1008, Limerick Generating Station Emergency Plan Annex (Revision 16)
EP-AA-120, Emergency Plan Administration (Revision 10)
10CFR50.54(q) Reviews 09-26, 09-28, 09-33, 09-36, 09-70, 09-74, 09-80

Section 40A1: Performance Indicator Verification

LS-AA-2110, Monthly Data Elements for NRC Emergency Response Organization 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 Reliability (Revision 5)
ERO Drill Participation PI data, January 2009 – September 2009
Alert Notification System PI data, January 2009 – September 2009
DEP PI data, January 2009 – September 2009

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
FEMA	Federal Emergency Management Agency
JIC	Joint Information Center
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
RSPS	Risk Significant Planning Standard
TSC	Technical Support Center