



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

December 9, 2010

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2
BASELINE EMERGENCY PREPAREDNESS BIENNIAL EXERCISE
INSPECTION REPORT 05000254/2010502(DRS); 05000265/2010502(DRS)

Dear Mr. Pacilio:

On November 19, 2010, the U. S. Nuclear Regulatory Commission (NRC) completed a Baseline Emergency Preparedness Biennial Exercise inspection at your Quad Cities Nuclear Power Station, Units 1 and 2. The enclosed report documents the results of this inspection, which were discussed on November 19, 2010, with Mr. R. Gideon, 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 NRC-identified and no self-revealed findings of very low safety significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, 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 System (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Hironori Peterson, Chief
Operations Branch
Division of Reactor Safety

Docket Nos. 50-254; 50-265
License Nos. DPR-29; DPR-30

Enclosure: Inspection Report 05000254/2010502(DRS);
05000265/2010502(DRS)
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-254; 50-265

License Nos: DPR-29, DPR-30

Report No: 05000254/2010502; 05000265/2010502

Licensee: Exelon Generation Company, LLC

Facility: Quad Cities Nuclear Power Station, Units 1 and 2

Location: Cordova, Illinois

Dates: November 15 through 19, 2010

Inspectors: Robert Jickling, Sr. Emergency Preparedness Inspector
Randal Baker, Operations Engineer
Brian Cushman, Resident Inspector

Approved by: Hironori Peterson, Chief
Operations Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000254/2010502, 05000265/2010502; 11/15/2010 – 11/19/2010; Quad Cities Nuclear Power Station, Units 1 and 2; Baseline Emergency Preparedness Biennial Exercise Inspection

This report covers a one week period of announced baseline inspection by two regional inspectors and one resident inspector. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. 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.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Emergency Preparedness

No findings of significance were identified.

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP1 Exercise Evaluation (71114.01)

.1 Exercise Evaluation

a. Inspection Scope

The inspectors reviewed the November 17, 2010, biennial emergency preparedness exercise's objectives and scenario to ensure that the exercise would acceptably test major elements of the licensee's emergency plan and to verify that the exercise's simulated problems provided an acceptable framework to support demonstration of the licensee's capability to implement its plan. The inspectors also reviewed records of other drills and exercises conducted in 2008, 2009, and 2010, to verify that those drills' scenarios were sufficiently different from the scenario used in the November 17, 2010 exercise.

The inspectors evaluated the licensee's exercise performance, focusing on the risk significant activities of emergency classification, notification, and protective action decision making, implementation of accident mitigation strategies, and correction of past exercise weaknesses in the following emergency response facilities:

- Control Room Simulator (CRS);
- Technical Support Center (TSC); and
- Emergency Operations Facility (EOF)

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interfaces with offsite officials, readiness of emergency facilities and related equipment, and overall implementation of the licensee's emergency plan.

The inspectors attended post-exercise critiques in the CRS, TSC, and EOF to evaluate the licensee's initial self-assessment of its exercise performance. The inspectors later met with the licensee's lead exercise evaluators and managers to obtain the licensee's findings and assessments of its exercise participants' performances. These self-assessments were then compared with the inspectors' independent observations and assessments to assess the licensee's ability to adequately critique its exercise performance. Documents reviewed are listed in the Attachment to this report.

This exercise evaluation inspection constituted one sample as defined in Inspection Procedure (IP) 71114.01-05.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

Cornerstone: Emergency Preparedness

4OA1 Performance Indicator (PI) Verification (71151)

.1 Drill/Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise Performance PI for the period from the first quarter 2009 through third quarter 2010. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the performance indicator to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; assessments of PI opportunities during pre-designated control room simulator training sessions, and performance during other drills. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one drill/exercise performance sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.2 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors sampled licensee submittals for the Emergency Response Organization (ERO) Drill Participation PI for the period from the first quarter 2009 through third quarter 2010. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; performance during the 2009 and 2010 exercises and drills; and revisions of the roster of personnel assigned to key emergency response organization positions. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one ERO drill participation sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.3 Alert and Notification System

a. Inspection Scope

The inspectors sampled licensee submittals for the Alert and Notification System (ANS) PI for the period from the first quarter 2009 through third quarter 2010. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI and results of periodic scheduled ANS operability tests. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one alert and notification system sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On November 19, 2010, the inspectors presented the inspection results to Mr. Randy Gideon and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

.2 Public and Media Briefing

On November 19, 2010, the inspector summarized the NRC's preliminary exercise inspection conclusions at a public and media briefings hosted by Department of Homeland Security/Federal Emergency Management Agency Regions V and VII Field Office staffs at the Quad Cities Station training building in Cordova, Illinois.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

R. Gideon, Senior Vice President
C. Alguire, Technical Manager
D. Barker, Operations Director
W. Beck, Regulatory Assurance Manager
J. Burkhead, Nuclear Oversight Manager
D. Collins, Radiation Protection Manager
P. Dohm, Corporate Emergency Preparedness
S. Frey, Emergency Preparedness Coordinator
K. Moser, Training Director
T. Petersen, Regulatory Assurance Lead
M. Prospero, Plant Manager
T. Scott, Station Online Work Manager
P. Summers, Maintenance Director
C. Tzomes, Emergency Preparedness Manager

Nuclear Regulatory Commission

J. McGhee, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened, Closed, and Discussed

None.

LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1EP1 Exercise Evaluation

EP-AA-1006; Exelon Nuclear Radiological Plan Annex for Quad Cities; Revision 28
Quad Cities Station 2010 NRC Graded Exercise Manual; November 10, 2010
Two Years of Drill and Exercise Scenario Timelines; August 2008 – November 2010
Two Years of Corrective Action Items from Drills and Exercises;
August 2008 – October 2010

AR 01147879; Exercise-Timely OSC Activation; December 3, 2010
AR 01147108; Exercise-OSC Briefings Were Not Satisfactory; December 1, 2010
AR 01142243; Exercise-NOS ID In-Plant Response Team Radiological Issues; November 18, 2010
AR 01142112; Exercise-NOS ID JIC Potential to Release Unapproved Information; November 18, 2010
AR 01142104; Exercise-NOS ID EOF Confusion Regarding Time of Shutdown after ATWS; November 18, 2010
IR 01141875; Exercise-NRC Biennial Graded Exercise Delayed; November 17, 2010

4OA1 Performance Indicator Verification

LS-AA-2110; Monthly Data Elements for NRC Emergency Response Organization Drill Participation; March 2009 – September 2010
LS-AA-2120; Monthly Data Elements for NRC Drill/Exercise Performance; January 2009 – September 2010
LS-AA-2130; Monthly Data Elements for NRC Alert and Notification System Reliability; January 2009 – September 2010
EP-AA-125-1003; ERO Readiness – Performance Indicators Guidance; Revision 7
Quad Cities Monthly Siren Availability Reports; January 2009 – September 2010
NRC Performance Indicator Monthly Data Summary; January 2009 – September 2010
AR 0185390; DEP Error Common Performance or Inaccurate Peer Check; September 29, 2010
AR 01072067; Missed Performance Indicator Opportunity during PI Drill; May 21, 2010
IR 01137262; DEP Opportunity Removals; November 8, 2010
IR 01124557; New Shift Manager DEP Opportunities Credited to Wrong Month; October 10, 2010
IR 01100877; Training Drill-SM Annotated Incorrect PAR on the NARS Form; August 12, 2010
IR 01085290; DEP Error Common Performance Shortcomings; September 29, 2010
IR 01083104; Quad Cities Sirens Scheduled Daily Test Motor Failure; June 22, 2010

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access Management System
ANS	Alert and Notification System
AR	Action Request
ATWS	Anticipated Transient Without Scram
CFR	Code of Federal Regulations
CRS	Control Room Simulator
DRS	Division of Reactor Safety
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Issue Report
JIC	Joint Information Center
NEI	Nuclear Energy Institute
NOS	Nuclear Oversight
NRC	U. S. Nuclear Regulatory Commission
OSC	Operations Support Center
PARS	Publicly Available Records
PI	Performance Indicator
SDP	Significance Determination Process
TSC	Technical Support Center

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Letter to Mr. Michael J. Pacilio from Mr. Hironori Peterson dated December 9, 2010

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INSPECTION

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