UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

October 2, 2014

Mr. Michael J. Pacilio
Senior VP, Exelon Generation Co., LLC
President and 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 05000254/2014502; 05000265/2014502

Dear Mr. Pacilio:

On August 29, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an 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 August 29, 2014, with Mr. S. Darin 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. No findings were identified during this inspection.

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 System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Richard A. Skokowski, Chief
Plant Support Branch
Division of Reactor Safety

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

Enclosure:
IR 05000254/2014502; 05000265/2014502
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-254; 50-265
License No:	DPR-29; DPR-30
Report No:	05000254/2014502; 05000265/2014502
Licensee:	Exelon Generation Company, LLC
Facility:	Quad Cities Nuclear Power Station, Units 1 and 2
Location:	Cordova, IL
Dates:	August 25 – 29, 2014
Inspectors:	R. Jickling, Senior Emergency Preparedness Inspector R. Murray, Senior Resident Inspector R. Baker, Operations Engineer J. Beavers, Emergency Preparedness Inspector J. Kutlesa, Physical Security Inspector
Approved by:	R. Skokowski, Chief Plant Support Branch Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000254/2014502, 05000265/2014502; 08/25/2014 – 08/29/2014; Quad Cities Nuclear Power Station, Units 1 and 2; Baseline Emergency Preparedness Exercise Evaluation - Hostile Action Event; Exercise Evaluation Scenario Review; Performance Indicator Verification.

This report covers a 1-week period of announced baseline inspection by four regional inspectors and one resident inspector. The significance of most findings is indicated by their color (i.e., Green, White, Yellow, and Red) using Inspection Manual Chapter 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 5, dated February 2014.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Emergency Preparedness

No findings were identified.

B. Licensee-Identified Violations

None

REPORT DETAILS

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness

1EP7 Exercise Evaluation – Hostile Action Event (71114.07)

.1 Exercise Evaluation

a. Inspection Scope

Title 10, *Code of Federal Regulations* (CFR), Part 50, Appendix E, Section IV.F.2.j, requires, in part, that nuclear power reactor licensees, in each eight calendar year exercise cycle, provide the opportunity for their Emergency Response Organization (ERO) to demonstrate proficiency in the key skills necessary to respond to a Hostile Action (HA) event directed at the plant site. Quad Cities Nuclear Power Station designed the August 27, 2014, exercise to satisfy this requirement, and the NRC inspected the Quad Cities Nuclear Power Station HA event exercise to assess the licensee's ability to effectively implement their Emergency Plan during a HA event and adequately protect public health and safety.

The exercise evaluation consisted of the following reviews and assessments:

- The adequacy of the licensee's performance in the biennial exercise conducted on August 27, 2014, regarding the implementation of the Risk-Significant Planning Standards in 10 CFR 50.47 (b)(4), (5), (9), and (10), which address emergency classification, offsite notification, radiological assessment, and Protective Action Recommendations (PAR), respectively.

- The overall adequacy of the licensee'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, Alternative Emergency Response Facility, Incident Command Post, Central Alarm Station, and the Emergency Operations Facility.

- A review of other performance areas such as the licensee ERO's recognition of abnormal plant conditions; command and control, including interactions with site security staff; intra and inter-facility communications; prioritization of mitigating activities; utilization of repair and field monitoring teams; interface with offsite agencies, including local law enforcement agencies; staffing and procedure adequacy; and the overall implementation of the Emergency Plan and its implementing procedures.

- Past performance issues from NRC inspection reports to determine the effectiveness of corrective actions, as demonstrated during this exercise, to ensure compliance with 10 CFR 50.47(b)(14).

- The adequacy of the licensee's post-exercise critiques, to evaluate Quad Cities Nuclear Power Station's self-assessment of its ERO performance during the August 27, 2014, exercise and to ensure compliance with 10 CFR Part 50, Appendix E, Section IV.F.2.g.

The inspectors reviewed various documents that are listed in the Attachment to this report. This inspection activity satisfied one inspection sample for the exercise evaluation on a biennial basis.

This exercise evaluation inspection constituted one sample as defined in Inspection Procedure (IP) 71114.07-06.

b. Findings

No findings were identified.

1EP8 Exercise Evaluation – Scenario Review (71114.08)

a. Inspection Scope

Prior to the inspection activity, the inspectors conducted an in-office review of the exercise objectives and scenarios submitted to the NRC using IP 71114.08, "Exercise Evaluation - Scenario Review," to determine if the exercise would test major elements of the Emergency Plan as required by 10 CFR 50.47(b)(14). This inspection activity represents one sample on a biennial cycle.

The inspectors reviewed various documents that are listed in the Attachment to this report. This inspection activity satisfied one inspection sample for the exercise evaluation on a biennial basis.

This review of the exercise objectives and scenario constituted one sample as defined in IP 71114.08-06.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

Cornerstone: Emergency Preparedness

4OA1 Performance Indicator Verification (71151)

.1 Drill/Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise Performance (DEP) Performance Indicator (PI) for the period from the third quarter 2013 through the second quarter 2014. To determine the accuracy of the DEP data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) document NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, was 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, 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 DEP sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.2 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors sampled licensee submittals for the ERO Drill Participation PI for the period from the third quarter 2013 through the second quarter 2014. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, was 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 2013 and 2014 drills, and revisions of the roster of personnel assigned to key ERO 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 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 third quarter 2013 through the second quarter 2014. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, was 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 ANS sample as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On August 29, 2014, the inspectors presented the biennial exercise inspection results to Mr. S. Darin and other members of the licensee's staff. The licensee acknowledged the issues presented.

The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

S. Darin, Site Vice President
C. Alguire, System Engineering Manager
W. Beck, Regulatory Assurance Manager
A. Daniels, Corporate Emergency Preparedness Manager
D. DeRycke, Security Operations Manager
M. Kaufman, Outage Manager
D. Kimler, Operations Director
S. Merrell, Emergency Preparedness Manager
A. Misak, Deputy Maintenance Director
K. Ohr, Site Engineering Director
R. Oswald, Chemistry Supervisor
T. Petersen, Regulatory Assurance Lead
P. Quealy, Corporate Senior Emergency Preparedness Specialist
A. Scott, Work Management Director
B. Stedman, Senior Engineering Manager
T. Wojick, Nuclear Oversight Manager

Nuclear Regulatory Commission

R. Murray, 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 inspectors 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.

1EP7 Exercise Evaluation (71114.07)

EP-AA-1000; Exelon Nuclear Standardized Radiological Emergency Plan; Revision 25

EP-AA-1006; Radiological Emergency Plan Annex for Quad Cities Station; Revision 36

EP-AA-110; Assessment of Emergencies; Revision 9

EP-AA-111; Emergency Classification and PARs; Revision 18

EP-AA-112; ERO/ERF Activation and Operation; Revision 16

EP-AA-113; Personnel Protective Action; Revision 11

EP-AA-122; Drills and Exercise Program; Revision 15

EP-AA-112-400; Emergency Operations Facility Activation and Operation; Revision 11

Two Year List of Drill and Exercise Corrective Action Program Issues; December 5, 2012 – August 29, 2014

Two Years of Drill and Exercise Timelines; December 5, 2012 – August 27, 2014

IR 01698891; HABEX-ICP Operations Liaison, Emergency Director, and Security Priorities and Sense of Urgency Coordination and Communications Problems; August 29, 2014

IR 01698002; HABEX-Responsibilities for Station Priorities was not Well Coordinated, Communicated, or Implemented; August 29, 2014

IR 01697998; HABEX-Scenario Needs Additional Data and Information to Support Response; August 29, 2014

IR 01697996; HABEX-EOF Initially did not Verify Plant Status or Coordinate Priorities; August 29, 2014

IR 01697992; HABEX-Alternative Emergency Response Facility Initially did not Verify Plant Equipment Status; August 29, 2014

IR 01697985; HABEX-Control Room Simulator Initially did not Verify Plant Equipment Status; August 29, 2014

IR 01697889; HABEX-Control Room Simulator Declared the General Emergency Earlier Than the Scenario; August 29, 2014

IR 01693749; RHR Service Water Vault Air Sample; August 18, 2014

IR 01690020; RHR SW Vault Sampling Equipment; August 7, 2014

IR 01688218; U2 RHR SW Vault Air Sample Results Greater Than 10 Percent LEL; August 1, 2014

1EP8 Exercise Evaluation – Scenario Review (71114.08)

Quad Cities Nuclear Power Station 2014 HAB Exercise 60 Day Submittal; May 28, 2014

4OA1 Performance Indicator Verification (71151)

EP-AA-125-1001; EP Performance Indicator Guidance; Revision 7

EP-AA-125-1002; ERO Performance Indicators Guidance; Revision 8

EP-AA-125-1003; ERO Readiness Performance Indicators Guidance; Revision 7

LS-AA-2110; Monthly Data Elements for NRC ERO Drill Participation; September 2013 -June 2014

LS-AA-2120; Monthly Data Elements for NRC Drill/Exercise Performance; July 2013 - June 2013

LS-AA-2130; Monthly Data Elements for NRC ANS Reliability; July 2013 – June 2014

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
ANS	Alert and Notification System
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
DRS	Division of Reactor Safety
ERO	Emergency Response Organization
HA	Hostile Action
IP	Inspection Procedure
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
PAR	Protective Action Recommendation
PARS	Publicly Available Records System
PI	Performance Indicator
SDP	Significance Determination Process

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Letter to Michael Pacilio from Richard A. Skokowski dated October 2, 2014

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2
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