



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

April 18, 2011

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: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3  
BASELINE EMERGENCY PREPAREDNESS BIENNIAL EXERCISE INSPECTION  
REPORT 05000237/2011502(DRS); 05000249/2011502(DRS)

Dear Mr. Pacilio:

On March 25, 2011, the U. S. Nuclear Regulatory Commission (NRC) completed a Baseline Emergency Preparedness Biennial Exercise inspection at your Dresden Nuclear Power Station, Units 2 and 3. The enclosed report documents the inspection findings, which were discussed on March 25, 2011, with Mr. S. Marik, 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, there were no findings of significance identified during this inspection.

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Sincerely,

*/RA/*

Hironori Peterson, Chief  
Operations Branch  
Division of Reactor Safety

Docket Nos. 50-237; 50-249  
License Nos. DPR-19; DPR-25

Enclosure: Inspection Report 05000237/2011502(DRS);  
05000249/2011502(DRS)  
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-237; 50-249

License Nos: DPR-19; DPR-25

Report No: 05000237/2011502(DRS); 05000249/2011502(DRS)

Licensee: Exelon Generation Company

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: Morris, IL

Dates: March 21 through 25, 2011

Inspectors: Robert Jickling, Senior Emergency Preparedness Inspector  
Bruce Palagi, Senior Reactor Operations Inspector  
Daneira Meléndez-Colón, Resident Inspector

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000237/2011502, 05000249/2011502; 03/21/2011 - 03/25/2011; Dresden Nuclear Power Station, Units 2 & 3; 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 were identified.

### **B. Licensee-Identified Violations**

No violations 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 March 23, 2011, 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 2009, 2010, and 2011, to verify that those drills' scenarios were sufficiently different from the scenario used in the March 23, 2011, 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 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 were identified.

1EP5 Correction of Emergency Preparedness Weaknesses (71114.05)

.1 Correction of Emergency Preparedness Weaknesses

a. Inspection Scope

The inspectors reviewed an emergency preparedness related corrective action program item, IR 01031751, concerning a Nuclear Oversight Identified issue for inadequate compensatory measure for degraded public address system equipment, to determine whether the evaluation and corrective actions were timely and effective. Documents reviewed are listed in the Attachment to this report.

b. Findings

No findings 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 2010 through fourth 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 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 2010 through fourth 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 2010 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 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 2010 through fourth 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 were identified.

#### 4OA6 Management Meetings

##### .1 Exit Meeting Summary

On March 25, 2011, the inspectors presented the biennial exercise inspection results to Mr. S. Marik 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 March 25, 2011, 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 Region V Field Office staff at the Grundy County Building in Morris, Illinois.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

S. Marik, Station Plant Manager  
J. Barowski, Security Supervisor  
A. Daniels, Corporate Emergency Preparedness Manager  
D. Doggett, Emergency Preparedness Coordinator  
P. Dohm, Corporate Emergency Preparedness Coordinator  
G. Graff, Nuclear Oversight Manager  
L. Jordan, Training Director  
B. Kapellas, Work Control Manager  
D. Leggett, Regulatory Assurance Manager  
P. Mankoo, Chemistry Supervisor  
M. McDonald, Acting Maintenance Director  
M. Overstreet, Lead Radiation Protection Supervisor  
P. Quealy, Emergency Preparedness Manager  
R. Ruffin, Regulatory Assurance  
F. Sadnick, Nuclear Oversight Assessor  
P. Wojtkiewicz, Operations Services Manager

#### Nuclear Regulatory Commission

C. Phillips, Senior Resident Inspector

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

#### Opened, Closed and Discussed

None

## LIST OF DOCUMENTS REVIEWED

The following is a 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 of 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

Dresden Station 2011 NRC Graded Exercise Manual March 23, 2011; March 14, 2011  
Exelon Nuclear Radiological Emergency Plan Annex for Dresden Station; Revision 27  
List of Two Years of Corrective Action Program Items; September 2009 – February 2011  
List of Two Years of Scenario Timelines; September 2009 – February 2011  
IR 01194576; Exercise, EOF-EOC Liaison Mis-Communication Regarding Dose Rates; March 30, 2011  
IR 01195249; Exercise, CRS-Did Not Notify OSC for 2 NLO Dispatches; March 31, 2011  
IR 01194538; Exercise, OSC-RP Did Not Inform Response Team of Increasing Drywell Radiation and Not All Personnel Followed Habitability Ban; March 30, 2011  
IR 01194537; Exercise, TSC-PA System Announcement Not Simulated within 15 Minutes of Evacuation and a Meteorological Forecast Was Not Obtained; March 30, 2011

### 1EP5 Correction of Emergency Preparedness Weaknesses

DAP 01-11; In Plant Communications Systems; Revisions 6 and 8  
OP-AA-102-104; Standing Order - Additional Compensatory Measures for EP Announcements; Revision 4  
Security Aid DRE #74; Security Action for EP Announcements; Revision 2  
IR 01192075; Review of Public Address System, Processes and Procedures; March 25, 2011  
IR 01031751; Nuclear Oversight Identified Finding Inadequate Compensatory Measure for Degraded EP Equipment – Public Address System; February 17, 2010  
IR 01031751, Assignment 2; Apparent Cause Report: NOS Identified Finding Inadequate Compensatory Measures for Degraded Emergency Preparedness Equipment – Public Address System; February 17, 2010

### 4OA1 Performance Indicator Verification

Dresden Monthly Siren Availability Reports; January – December 2010  
SAMG Focused Area Drill Report; December 28, 2010  
EP-AA-125-1002; DEP PI Data Reporting Element Summary; January – December 2010  
EP-AA-125-1003; Key ERO Participation and Stability Monthly Data Reporting Elements; March – December 2010

LS-AA-2110; Monthly Data Elements for NRC Emergency Response Organization (ERO) Drill Participation; March - December 2010

LS-AA-2120; Monthly Data Elements for NRC Drill and Exercise Performance; January - December 2010

LS-AA-2130; Monthly Data Elements for NRC Alert and Notification System (ANS) Reliability; January – December 2010

IR 01166617; EP Focused Area Self-Assessment-ANS Data; January 25, 2011

## LIST OF ACRONYMS USED

ADAMS	Agency-wide Documents Access and Management System
ANS	Alert and Notification System
AR	Action Request
CFR	Code of Federal Regulations
CRS	Control Room Simulator
DRS	Division of Reactor Safety
DEP	Drill and Exercise Performance
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Issue Report
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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