



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

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

September 2, 2015

Mr. Bryan C. Hanson  
Senior VP, Exelon Generation Company, LLC  
President and 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 05000237/2015502; 05000249/2015502

Dear Mr. Hanson:

On July 31, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed a baseline emergency preparedness biennial exercise inspection at the Dresden Nuclear Power Station, Units 2 and 3. The enclosed report documents the results of this inspection which were discussed on July 31, 2015, with Mr. M. Shane 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 Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," 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's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management 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,

**/RA/**

Brian J. Kemker, Acting Chief  
Plant Support Branch  
Division of Reactor Safety

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

Enclosure:  
IR 05000237/2015502; 05000249/2015502  
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-237; 50-249  
License No: DPR-19; DPR-25

Report No: 05000237/2015502; 05000249/2015502

Licensee: Exelon Generation Company, LLC

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: Morris, IL

Dates: July 27 – 31, 2015

Inspectors: G. Hansen, Senior Emergency Preparedness Inspector  
G. Roach, Senior Resident Inspector  
P. Elkmann, Senior Emergency Preparedness Inspector  
J. Maynen, Senior Security Inspector  
J. Kutlesa, Security Inspector

Approved by: B. Kemker, Acting Chief  
Plant Support Branch  
Division of Reactor Safety

Enclosure

## **SUMMARY**

IR 05000237/2015502; 05000249/2015502; 07/27/2015 – 07/31/2015; Dresden Nuclear Power Station, Units 2 and 3; Baseline Emergency Preparedness Biennial Exercise Inspection; Exercise Evaluation Scenario Review; Performance Indicator Verification.

This report covers a one-week period of announced baseline inspection by four regional inspectors and one resident inspector. 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.

### **NRC-Identified and Self-Revealed Findings**

#### **Cornerstone: Emergency Preparedness**

No findings were identified.

### **Licensee-Identified Violations**

None

## REPORT DETAILS

### 1. REACTOR SAFETY

#### Cornerstone: Emergency Preparedness

#### 1EP1 Exercise Evaluation (71114.01)

##### .1 Exercise Evaluation

##### a. Inspection Scope

The inspectors reviewed the July 29, 2015, biennial emergency preparedness exercise 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 2013, 2014, and 2015, to verify that those drills' scenarios were sufficiently different from the scenario used in the July 29, 2015, exercise.

The inspectors observed and 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);
- Operations Support Center (OSC); 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, OSC, 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.

##### 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 Title 10 of the *Code of Federal Regulations* (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.

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 third quarter 2014 through the second quarter 2015. To determine the accuracy of the DEP data reported during this period, PI definitions and guidance contained in Nuclear Energy Institute (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 PI verification inspection sample as defined in IP 71151.

b. Findings

No findings were identified.

.2 Emergency Response Organization (ERO) Drill Participation

a. Inspection Scope

The inspectors sampled licensee submittals for the ERO Drill Participation PI for the third quarter of 2014, through the second quarter of 2015. To determine the accuracy of the PI data reported during this period, 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 2014 and 2015 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 PI verification inspection sample as defined in IP 71151.

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 third quarter 2014 through the second quarter 2015. To determine the accuracy of the PI data reported during this period, 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 PI verification inspection sample as defined in IP 71151.

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On July 31, 2015, the inspectors presented the biennial exercise inspection results to Mr. M. Shane, 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 July 31, 2015, the inspectors summarized the NRC's preliminary exercise inspection conclusions at a public and media briefing hosted by Department of Homeland Security/Federal Emergency Management Agency, Region V, Field Office staff, at the Grundy County Emergency Operations Center in Morris, Illinois.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

M. Shane, Site Vice President  
J. Washko, Plant Manager  
G. Morrow, Operations Director  
B. Franzen, Regulatory Assurance Manager  
B. Kapellas, Maintenance Director  
K. Aleshire, Director Emergency Preparedness (Corporate)  
D. Doggett, Emergency Preparedness Manager  
S. Matzke, Emergency Preparedness Program Coordinator  
P. Quealy, Drill and Exercise Coordinator (Corporate)  
R. Schmidt, Chemistry Manager  
M. Overstreet, Radiation Protection Manager  
L. Antos, Security Manager  
G. Baxa, Principal Regulatory Engineer  
P. O'Brien, PI Manager/CAP Manager  
M. Cook, Performance Assessment Assessor  
D. Walker, NRC Coordinator

#### U.S. Nuclear Regulatory Commission

G. Roach, Senior Resident Inspector  
D. Lords, 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 Standardized Radiological Emergency Plan; Revision 26  
EP-AA-1004; Radiological Emergency Plan Annex for Dresden Station; Revision 34  
EP-AA-1002 Addendum 1; Dresden Station On-Shift Staffing Technical Basis; Revision 0  
EP-AA-110; Assessment of Emergencies; Revision 9  
EP-AA-111; Emergency Classification and Protective Action Recommendations; Revision 19  
EP-AA-111-F-04; Dresden Plant Based PAR Flowchart  
EP-AA-112; Emergency Response Organization (ERO)/Emergency Response Facility Activation and Operation; Revision 17  
EP-AA-113; Personnel Protective Actions; Revision 12  
EP-AA-114; Notifications; Revision 13  
EP-AA-115; Termination and Recovery; Revision 9  
EP-AA-122; Drills and Exercise Program; Revision 17  
EP-AA-122-300-F-01; Drill and Exercise Evaluation Criteria; Revision D  
DAN 902(3) – 3 D-4; “Isolation Condenser Level Hi/Lo”; Revision 12  
DAN 902(3) – 4 G-18; “Drywell Floor DRN Sump LVL Hi”; Revision 09  
DAN 902(3) – 4 H-18; “Drywell Floor DRN Sump LVL Hi/Hi”; Revision 10  
DOA 0040-01; “Slow Leak”; Revision 28  
DOP 1300-02; “Automatic Operation of Isolation Condenser”; Revision 26  
DOP 1300-03; “Manual Operation of the Isolation Condenser”; Revision 35  
DOP 2000-24; “Drywell Sump Operation”; Revision 30  
Two-Year List of Drill and Exercise Condition Reports; Dated July 2013 – July 2015  
Two Years of Drill and Exercise Timelines; Dated July 2013 – July 2015  
Dresden 2015 NRC Graded Exercise Evaluation Report  
PowerPoint Presentation; Dresden Station 2015 NRC Evaluated Exercise Critique  
AR 02535087; Dresden NRC EP Exercise – Demonstration Fail – OSC; Dated July 30, 2015  
AR 02535105; Dresden NRC EP Exercise – Assembly/Accountability – OSC; Dated July 30, 2015

AR 02535166; DRE-EP-2015-NRC-EX-TSC Failed DCS; Dated July 30, 2015  
AR 02535255; Failed DEP Opportunity during Dresden Exercise; Dated July 30, 2015  
AR 01547890; EP Full Drill Management and Scenario Issues; Dated August 8, 2013  
AR 01547892; EP Full Drill Facilities and Equipment Issues; Dated August 8, 2013  
AR 02434605; 4Q14 EP Focus Area Drill Comments Roll-up and Lessons Learned;  
Dated January 8, 2015  
AR 02434605; EP 4Q14 Drill and Equipment Enhancements; Dated January 8, 2015  
AR 02439074; ERDS Failure; Dated January 18, 2015  
AR 02495755; EP- Lessons Learned from April You Make the Call (YMTC);  
Dated May 5, 2015  
AR 02498222; EP- Ops Status Line Inop; Dated May 9, 2015  
AR 02516013; NOS ID: EP Pre-Exercise Drill Observation; Dated June 17, 2015  
AR 02516519; DRE 2015 Pre Exercise CR Failed Objective J.1; Dated June 18, 2015  
AR 02516523; DRE 2015 Pre Exercise CR Failed Objective K.5; Dated June 18, 2015

1EP8 Exercise Evaluation – Scenario Review (71114.08)

Dresden Station 2015 NRC Graded Exercise 60 Day Submittal; Dated May 2015

4OA1 Performance Indicator Verification (71151)

ERO Drill Participation; Third Quarter of 2014 – Second Quarter of 2015

DEP Opportunities; Third Quarter of 2014 – Second Quarter of 2015

ANS Reliability; Third Quarter of 2014 – Second Quarter of 2015

## LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
ANS	Alert and Notification System
10 CFR	Title of the <i>Code of Federal Regulations</i>
CRS	Control Room Simulator
DEP	Drill and Exercise Performance
EOF	Emergency Operations Facility
ERO	Emergency Response Organization
IP	Inspection Procedure
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
OSC	Operations Support Center
PARS	Publicly Available Records System
PI	Performance Indicator
SDP	Significance Determination Process
TSC	Technical Support Center

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BASELINE EMERGENCY PREPAREDNESS BIENNIAL EXERCISE INSPECTION  
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