#### March 21, 2005

Mr. Christopher M. Crane President and Chief Nuclear Officer Exelon Nuclear Exelon Generation Company, LLC 4300 Winfield Road Warrenville, IL 60555

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3

NRC EMERGENCY PREPAREDNESS INSPECTION REPORT NO. 05000237/2005006(DRS); 05000249/2005006(DRS)

Dear Mr. Crane:

On March 11, 2005, the NRC completed an inspection at your Dresden Nuclear Power Station. The enclosed report documents the inspection findings, which were discussed on March 11, 2005, with Mr. D. Bost 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. Specifically, this inspection focused on emergency preparedness, including your staff's determinations of performance indicators for the Emergency Preparedness Cornerstone.

On the basis of the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR Part 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <a href="http://www.nrc.gov/reading-rm/adams.html">http://www.nrc.gov/reading-rm/adams.html</a> (the Public Electronic Reading Room).

Sincerely,

/RA/

Kenneth Riemer, Chief Security and Preparedness Branch Division of Reactor Safety

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

Enclosure: Inspection Report 05000237/2005006(DRS);

05000249/2005006(DRS)

See Attached Distribution

C. Crane -2-

cc w/encl: Site Vice President - Dresden Nuclear Power Station

Dresden Nuclear Power Station Plant Manager Regulatory Assurance Manager - Dresden

**Chief Operating Officer** 

Senior Vice President - Nuclear Services Senior Vice President - Mid-West Regional

**Operating Group** 

Vice President - Mid-West Operations Support Vice President - Licensing and Regulatory Affairs

Director Licensing - Mid-West Regional

Operating Group

Manager Licensing - Dresden and Quad Cities Senior Counsel, Nuclear, Mid-West Regional

Operating Group

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Illinois Department of Nuclear Safety

State Liaison Officer

Chairman, Illinois Commerce Commission

W. King, FEMA, Region V

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

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Sincerely,

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Kenneth Riemer, Chief Security and Preparedness Branch Division of Reactor Safety

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

Enclosure: Inspection Report 05000237/2005006(DRS);

05000249/2005006(DRS)

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C. Crane -2-

cc w/encl: Site Vice President - Dresden Nuclear Power Station

Dresden Nuclear Power Station Plant Manager Regulatory Assurance Manager - Dresden

Chief Operating Officer

Senior Vice President - Nuclear Services Senior Vice President - Mid-West Regional

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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: 05000237/2005006(DRS); 05000249/2005006(DRS)

Licensee: Exelon Generating Company, LLC

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: 6500 North Dresden Road

Morris, IL 60450

Dates: March 7 through March 11, 2005

Inspectors: T. Ploski, Senior Emergency Preparedness Inspector

R. Jickling, Emergency Preparedness Inspector C. Phillips, Acting Senior Resident Inspector

Observers: A. Dahbur, Reactor Engineer

M. Munir, Reactor Engineer E. Skarpac, General Engineer

Approved by: K. Riemer, Chief

Security and Preparedness Branch

Division of Reactor Safety

#### **SUMMARY OF FINDINGS**

IR 05000237/2005006(DRS); 05000249/2005006(DRS); 03/07/2005 - 03/11/2005; Dresden Nuclear Power Station, Units 2 & 3; Emergency Preparedness Specialist Report.

The report covers a one-week baseline inspection by two regional emergency preparedness inspectors and a senior resident inspector. The inspection focused on the Emergency Preparedness Cornerstone in the Reactor Safety strategic performance area during the biennial emergency preparedness exercise. This inspection also included a review of records related to the three emergency preparedness performance indicators for the period October 1, 2003, through December 31, 2004. One Green Non-Cited Violation was identified.

The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

## A. Inspector-Identified and Self-Revealed Findings

None.

### B. Licensee-Identified Violations

• Green. Title 10 CFR 50.47 (b) (15) requires, in part, that radiological emergency response training is provided to those who may be called on to assist in an emergency. Table B-1 of the licensee's Standardized Emergency Plan required that the minimum on-shift staffing included two Radiation Protection (RP) personnel for in-plant protective actions. In September 2004, the licensee identified that this commitment was met by one on-shift RP technician and one on-shift chemistry technician that had been trained and qualified to perform in-plant protective actions. However, the licensee also determined that chemistry technicians' training had evolved such that this training no longer met all requirements to provide in-plant protection actions.

Timely corrective actions included assigning two RP technicians on all back shifts, initiating revision of the standardized ERO training procedure, and initiating an assessment of ERO position qualifications in cases where some ERO training was being performed by other departments. Because no emergencies had occurred that required in-plant protective actions and the licensee's timely corrective actions included staffing a minimum of two RP technicians on-shift, this violation is not more than of very low significance, and is being treated as a Non-Cited Violation. (Section 4OA7)

### **REPORT DETAILS**

### 1. REACTOR SAFETY

**Cornerstone: Emergency Preparedness** 

1EP1 Exercise Evaluation (71114.01)

### a. <u>Inspection Scope</u>

The inspectors reviewed the March 2005 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 excerpts of records of two emergency preparedness drills, which were conducted on April 21, 2004, and February 16, 2005, to determine whether those drills' scenarios were sufficiently different from the scenario used in the March 9, 2005, exercise.

The inspectors evaluated the licensee's exercise performance, focusing on the risk-significant activities of emergency classification, notification, and protective action decision making, as well as implementation of accident mitigation strategies 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 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 to obtain the licensee's refined 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 station performance during the exercise.

These activities completed one inspection sample.

### b. Findings

No findings of significance were identified.

## 1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

### a. Inspection Scope

The inspectors performed a screening review of Revision 18 of the Dresden Station's Annex to the Exelon Standardized Emergency Plan, as well as the licensee's associated 50.54(q) evaluation of the changes incorporated in Revision 18, to determine whether changes in Revision 18 decreased the effectiveness of the licensee's emergency planning for the Dresden Station. The inspectors also reviewed seven letters of agreement with offsite support organizations to determine whether these agreements were current and whether the types of support to be provided were consistent with statements in the Dresden Annex. The screening review did not constitute an approval of Revision 18 of the Dresden Annex and, as such, the changes are subject to future NRC inspection to ensure that the Dresden Annex of the standardized plan continues to meet NRC regulations.

These activities completed one inspection sample.

# b. Findings

No findings of significance were identified.

### 4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

**Cornerstone: Emergency Preparedness** 

.1 Reactor Safety Strategic Area

#### a. Inspection Scope

The inspectors reviewed the licensee's records associated with each of the three emergency preparedness Pls to verify that the licensee's program was implemented consistent with the industry guidelines in Nuclear Energy Institute Publication No. 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 2, and related licensee procedures. Specifically, licensee records related to the performance of the Alert and Notification System (ANS), key Emergency Response Organization (ERO) members' drill participation, and Drill and Exercise Performance (DEP) were reviewed to verify the accuracy and completeness of the PI data submitted to NRC for the period from October 1, 2003 through December 31, 2004. The following three PIs were reviewed:

### Common

- ANS;
- ERO Drill Participation; and
- Drill and Exercise Performance.

These activities completed thee PI samples.

# b. <u>Findings</u>

No findings of significance were identified.

## 4OA2 Identification and Resolution of Problems (71114.01)

The following performance concerns, which could have adversely impacted emergency response activities if events had been real, were independently identified by the licensee and by the inspectors during the March 2005 exercise:

- The licensee did not initially notify the simulated NRC Headquarters Operations Officer within 60 minutes of the first emergency declaration.
- The responsible licensee decision maker incorrectly declared a General Emergency roughly 70 minutes before simulated plant conditions had degraded enough to warrant this emergency reclassification.

### 4OA6 Meetings

# .1 <u>Exit Meeting</u>

An exit meeting was conducted for:

 Emergency Preparedness with Mr. D. Bost and other members of licensee management and staff at the conclusion of the inspection on March 11, 2005.
 The licensee acknowledged the information presented. No proprietary information was identified.

## 4OA7 Licensee Identified Violations

The following violation of very low significance (Green) was identified by the licensee and is a violation of NRC requirements which met the criteria of Section VI of the NRC Enforcement Manual, Nuclear Regulatory Guide (NUREG)-1600, for being dispositioned as a Non-Cited Violation (NCV).

### **Cornerstone: Emergency Preparedness**

Title 10 CFR 50.47 (b) (15) requires, in part, that radiological emergency response training is provided to those who may be called on to assist in an emergency. Table B-1 of the licensee's Standardized Emergency Plan required that the minimum on-shift staffing included two Radiation Protection (RP) personnel for in-plant protective actions.

In September 2004, EP staff based at another of the licensee's Illinois nuclear stations identified that this emergency plan commitment was met by one on-shift RP technician and one on-shift chemistry technician that had been trained and qualified to perform in-plant protective actions. However, the licensee also determined that chemistry technicians' training had evolved such that it no longer met all requirements to provide in-plant protection actions.

In early December, the licensee completed an adequate root cause investigation of this concern's possible impact at each of its Illinois nuclear stations. Timely corrective actions included assigning two RP technicians on all back shifts, initiating revision of the standardized ERO training procedure, and initiating an assessment of ERO position qualifications in cases where some ERO training was being performed by other departments. Longer-term actions included provisions for an effectiveness review of measures taken to ensure that two qualified RP technicians were always on-shift. Because no emergencies had occurred that required in-plant protective actions and the licensee's timely corrective actions included staffing a minimum of two RP technicians on-shift, this violation is not more than of very low significance, and is being treated as an NCV.

ATTACHMENT: SUPPLEMENTAL INFORMATION

### SUPPLEMENTAL INFORMATION

### **KEY POINTS OF CONTACT**

## <u>Licensee</u>

- G. Bockholdt, Maintenance Director.
- D. Bost. Site Vice President
- S. Erickson, Corporate Emergency Planning Specialist
- R. Gadbois, Operations Director
- J. Griffin, NRC Coordinator
- A. Khanifar, Nuclear Oversight Manager
- S. McCain, Corporate Emergency Preparedness Manager
- P. Salas, Regulatory Assurance Manager
- C. Symonds, Training Director
- D. Wozniak, Plant Manager

# LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed
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None.

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 Exercise Scenario Manual; dated March 9, 2005

Dresden 2005 Pre-Exercise Scenario Manual; dated February 16, 2005

Draft Dresden 2005 Exercise Findings and Observations Report; undated

Internal Memorandum; Dresden April 2004 Off-Year Exercise Findings and Observation Report; dated April 30, 2004

Dresden Station Annex to the Exelon Standardized Emergency Plan; Revision 18

EP-AA-110; Assessment of Emergencies; Revision 5

EP-AA-111; Emergency Classification and Protective Action Recommendations; Revision 9

EP-AA-111-F-04; Dresden Plant-Based Protective Action Recommendation Flowchart; Revision B

EP-AA-112; Emergency Response Organization and Emergency Response Facility Activation and Operation; Revision 9

EP-AA-112-100; Control Room Operation; Revision 7

EP-AA-112-200; TSC Activation and Operation; Revision 5

EP-AA-112-300; OSC Activation and Operation; Revision 5

EP-AA-112-400; EOF Activation and Operation; Revision 5

EP-AA-113; Personnel Protective Actions; Revision 5

EP-AA-114; Notifications; Revision 6

EP-MW-110-200; Dose Assessment; Revision 3

EP-MW-114-100; Midwest Region Offsite Notifications; Revision 5

AR303053; Weakness Identified in Exercise Management and Control During February 2005 Drill

AR303066; Weakness in Procedure Adherence Identified During February 2005 Drill

AR303083; Transfer of Command and Control Objective Failure in TSC During February 2005 Drill

Focus Area Self-Assessment; 2005 NRC Baseline Inspection; dated March 2, 2005

## 1EP4 Emergency Action Level and Emergency Plan Changes

Dresden Station Annex to the Exelon Standardized Emergency Plan; Revision 18

50.54(q) Program Effectiveness and Evaluation Review Number 04-08; Revision 18 of the Dresden Annex to Exelon Standardized Emergency Plan; dated May 27, 2004

Letters of Agreement With Seven, Site-Specific, Offsite Support Organizations for the Dresden Station

Root Cause Investigation Report; Emergency Plan Radiation Protection On-Shift Requirement Not Met Due to Lapsed Radiation Protection Qualifications of Chemistry Technicians; dated December 3, 2004

AR258767; Emergency Plan On-Shift Requirement Not Met Due to Lapsed Radiation Protection Qualifications of Chemistry Technicians

### 4OA1 Performance Indicator Verification

EP-AA-125-1001; Emergency Preparedness Performance Indicator Guidance; Revision 3

EP-AA-125-1002; ERO Drill/Exercise Performance - Performance Indicator Guidance; Revision 3

EP-AA-125-1003; ERO Readiness - Performance Indicator Guidance; Revision 4

Dresden Station's Emergency Planning Zone Sirens' Daily and Monthly Operability Reports - October 2003 Through December 2004

LS-AA-2110; Monthly PI Data Elements for ERO Drill Participation - October 2003 Through December 2004; Revision 5

LS-AA-2120; Monthly PI Data Elements for Drill/Exercise Performance - October 2003 Through December 2004; Revision 3

LS-AA-2130; Monthly PI Data Elements for ANS Reliability - October 2003 Through December 2004; Revision 4

NRC Event Report 40727; Unit 3 Unusual Event Due to Loss of Offsite Power; dated May 5, 2004

NRC Event Report 40844; Unusual Event Due to Earthquake Felt Onsite; dated June 28, 2004

Internal Memorandum; Dresden Station May 5, 2004 Unusual Event Report; dated May 13, 2004

Internal Memorandum; Dresden Station June 28, 2004, Unusual Event Report; dated June 28, 2004

# LIST OF ACRONYMS USED

ANS Alert and Notification System

AR Action Request

CFR Code of Federal Regulations

CR Condition Report

CRS Control Room Simulator

DEP Drill and Exercise Performance
EOF Emergency Operations Facility
ERO Emergency Response Organization

NCV Non-Cited Violation

NRC United States Nuclear Regulatory Commission

NUREG Nuclear Regulatory Guide
OSC Operations Support Center
PI Performance Indicator
RP Radiation Protection

TSC Technical Support Center

4 Attachment