

December 21, 2001

Mr. Oliver D. Kingsley, President  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: BYRON STATION, UNITS 1 AND 2  
NRC INSPECTION REPORT 50-454/01-13(DRS); 50-455/01-13(DRS)

Dear Mr. Kingsley:

On November 30, 2001, the NRC completed an inspection at your Byron Station, Units 1 and 2. The enclosed report documents the inspection findings, which were discussed on November 30, 2001, with Mr. R. Lopriore 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.

No findings of significance were identified.

In accordance with 10 CFR Part 2.790 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 <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

Kenneth R. Riemer, Chief  
Plant Support Branch  
Division of Reactor Safety

Docket Nos. 50-454; 50-455  
License Nos. NPF-37; NPF-66

Enclosure: Inspection Report 50-454/01-13(DRS);  
50-455/01-13(DRS)

See Attached Distribution

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C. Crane, Senior Vice President, Midwest ROG  
J. Benjamin, Vice President Licensing  
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S. Kuczynski, Station Manager  
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M. Aguilar, Assistant Attorney General  
Illinois Department of Nuclear Safety  
State Liaison Officer  
State Liaison Officer, State of Wisconsin  
Chairman, Illinois Commerce Commission  
W. Curtis, FEMA, Region V

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-454; 50-455  
License Nos: NPF-37; NPF-66

Report No: 50-454/01-13(DRS); 50-455/01-13(DRS)

Licensee: Exelon Generation Company, LLC

Facility: Byron Station, Units 1 and 2

Location: 4450 German Church Road  
Byron, IL 61010

Dates: November 26 through November 30, 2001

Inspectors: T. Ploski, Senior Emergency Preparedness Analyst  
R. Jickling, Emergency Preparedness Analyst  
D. McNeil, Senior Examiner

Observers: P. Snyder, Inspector  
N. Valos, Examiner

Approved by: Kenneth Riemer, Chief  
Plant Support Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000454-01-13(DRS), 05000455-01-13(DRS), on 11/26-11/30/2001, Exelon Generation Company, LLC, Byron Station, Units 1 and 2. Emergency Preparedness Specialist Report.

The report covers a one week baseline inspection by two regional emergency preparedness inspectors and an examiner. The inspection focused on the Reactor Safety, Emergency Preparedness Cornerstone, during the biennial emergency preparedness exercise, and included a review of records related to the three emergency preparedness performance indicators for the period ending September 30, 2001. No findings of significance were identified.

The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www/nrc.gov/NRR/OVERSIGHT/index.html>. Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violations.

## Report Details

### Summary of Plant Status

The plant was at about 100 percent power throughout the inspection period.

#### **1. REACTOR SAFETY**

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

#### 1EP1 Exercise Evaluation (71114.01)

##### a. Inspection Scope

The inspectors reviewed the November 2001 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 a practice drill, which was conducted in October 2001, and an earlier tabletop drill to determine whether the associated accident scenarios were sufficiently different from the scenario used in the November 28, 2001 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
- Technical Support Center (TSC)
- Operations Support Center (OSC)
- 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 OSC, 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 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. On November 30, 2001, an inspector summarized the NRC's preliminary inspection results at a public and media briefing hosted by the Federal Emergency Management Agency in Oregon, Illinois.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope

The inspectors reviewed the licensee's records related to each of the three emergency preparedness PIs to verify that the licensee's program was implemented consistent with the industry guidelines in Nuclear Energy Institute publication No. 99-02 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 data submitted to NRC for the period January 2001 through September 2001.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting

The inspectors presented the inspection results to Mr. R. Lopriore and other members of licensee management and staff at the conclusion of the inspection on November 30, 2001. The licensee acknowledged the information presented. No proprietary information was identified.



## KEY POINTS OF CONTACT

### Licensee

R. Blaine, Radiation Protection Manager  
C. Brown, EP Coordinator  
P. Donnelly, Maintenance Superintendent  
D. Drawbaugh, Regulatory Assurance Coordinator  
S. Gackstetter, Operations Superintendent  
W. Grundmann, Regulatory Assurance Manager  
M. Heinzer, Nuclear Oversight  
R. Krohn, Security Supervisor  
S. Kuczynski, Station Manager  
R. Lopriore, Site Vice President  
S. Merrell, EP Staff  
R. Sproule, Nuclear Oversight  
P. Sunderland, Corporate EP Staff

## LIST OF ACRONYMS USED

ANS	Alert and Notification System
CFR	Code of Federal Regulations
DEP	Drill and Exercise Performance
DRS	Division of Reactor Safety
EOF	Emergency Operations Facility
ERO	Emergency Response Organization
IR	Inspection Report
NRC	Nuclear Regulatory Commission
OSC	Operations Support Center
PI	Performance Indicator
TSC	Technical Support Center

## LIST OF DOCUMENTS REVIEWED

### 1EP1 Exercise Evaluation

	November 2001 Emergency Exercise Manual	
	Summary of October 2001 Drill Scenario	
	Summary of Tabletop Drill Scenario	
	November Exercise Critique Draft Summary	
	Exelon Nuclear Standardized Emergency Plan	Revision 11
	Byron Station Annex to the Emergency Plan	Revision 8
EP-AA-111	Classification of Emergencies	Revision 0
EP-AA-112	ERO and Emergency Response Facility	
	Activation and Operation	Revision 3
EP-AA-113	Protective Actions	Revision 1
EP-AA-114	Notifications	Revision 0

### 40A1 Performance Indicator Verification

	Byron Monthly Siren Availability Reports, January 2001 through September 2001	
	Byron Off-Site Siren Test Plan	Revision 2
	PI Data Summary Report - Third Quarter 2001	
	ERO Drill and Exercise Participation Records, January 2001 through September 2001	
	Records of DEP Opportunities, January 2001 through September 2001	
RS-AA-122-108	ERO Drill/Exercise Performance	Revision 1
RS-AA-122-109	ERO Drill Participation	Revision 1
RS-AA-122-110	ANS Reliability	Revision 1
LS-AA-2110	Monthly PI Data for ERO Drill Participation	Revision 0
CR-B2001-00279	Potential PI Data Discrepancy	January 2001
CR-B2001-01609	EP PI Review	April 2001
CR-B2001-02409	Environs Radio Inability to Communicate with EOF	May 2001
CR-B2001-03397	Tabletop Drill Issues - Missed PI Opportunities	August 2001
CR-84351	Siren Monthly Data Reporting Inconsistency	November 2001
AR-00042988	Potential PI Data Inconsistency	February 2001
AR-00074467	Emergency Action Level Needs Clarification of "Significant"	August 2001
AR-00077892	Radio Transmission Failure	October 2001
AR-00081814	Failure of NRC Telephone in the TSC	November 2001
AR-00082968	Nuclear Oversight Identified Enhancements in Medical Drill	November 2001