

March 21, 2001

Mr. Oliver D. Kingsley, President  
Exelon Nuclear  
Exelon Generation Company, LLC  
1400 Opus Place, Suite 500  
Downers Grove, IL 60515

SUBJECT: QUAD CITIES NUCLEAR POWER STATION - NRC INSPECTION  
REPORT 50-254/01-06(DRS); 50-265/01-06(DRS)

Dear Mr. Kingsley:

On March 9, 2001, the NRC completed a baseline inspection at your Quad Cities Nuclear Power Station, Units 1 and 2. The results of this inspection were discussed on March 9, 2001, with Mr. Tulon and other members of your staff. The enclosed report presents the results of that inspection.

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 of significance were identified.

In accordance with 10 CFR 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).

We will gladly discuss any question you have concerning this inspection.

Sincerely,

**/RA/**

John M. Jacobson, Chief  
Mechanical Engineering Branch  
Division of Reactor Safety

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

Enclosure: Inspection Report 50-254/01-06(DRS);  
50-265/01-06(DRS)

See Attached Distribution

Mr. Oliver D. Kingsley, President  
Exelon Nuclear  
Exelon Generation Company, LLC  
1400 Opus Place, Suite 500  
Downers Grove, IL 60515

SUBJECT: QUAD CITIES NUCLEAR POWER STATION - NRC INSPECTION  
REPORT 50-254/01-06(DRS); 50-265/01-06(DRS)

Dear Mr. Kingsley:

On March 9, 2001, the NRC completed a baseline inspection at your Quad Cities Nuclear Power Station, Units 1 and 2. The results of this inspection were discussed on March 9, 2001, with Mr. Tulon and other members of your staff. The enclosed report presents the results of that inspection.

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 of significance were identified.

In accordance with 10 CFR 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).

We will gladly discuss any question you have concerning this inspection.

Sincerely,  
**/RAJ**  
John M. Jacobson, Chief  
Mechanical Engineering Branch  
Division of Reactor Safety

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

Enclosure: Inspection Report 50-254/01-06(DRS);  
50-265/01-06(DRS)

See Attached Distribution

DOCUMENT NAME: C:\qua01-06drs.wpd

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RIII	RIII	RIII		
NAME	DSchrum:jb	MRing	JJacobson		
DATE	03/21/01	03/21/01	03/21/01		

**OFFICIAL RECORD COPY**

cc w/encl: W. Bohlke, Senior Vice President, Nuclear Services  
C. Crane, Senior Vice President - Mid-West Regional  
J. Cotton, Senior Vice President - Operations Support  
J. Benjamin, Vice President - Licensing and Regulatory Affairs  
R. Krich, Director - Licensing  
H. Stanley, Operations Vice President  
J. Skolds, Chief Operating Officer  
R. Helfrich, Senior Counsel, Nuclear  
DCD - Licensing  
T. J. Tulon, Site Vice President  
G. Barnes, Quad Cities Station Manager  
W. Beck, Regulatory Affairs Manager  
W. Leach, Manager - Nuclear  
Vice President - Law and Regulatory Affairs  
Mid American Energy Company  
M. Aguilar, Assistant Attorney General  
Illinois Department of Nuclear Safety  
State Liaison Officer, State of Illinois  
State Liaison Officer, State of Iowa  
Chairman, Illinois Commerce Commission

cc w/encl: W. Bohlke, Senior Vice President, Nuclear Services  
C. Crane, Senior Vice President - Mid-West Regional  
J. Cotton, Senior Vice President - Operations Support  
J. Benjamin, Vice President - Licensing and Regulatory Affairs  
R. Krich, Director - Licensing  
H. Stanley, Operations Vice President  
J. Skolds, Chief Operating Officer  
R. Helfrich, Senior Counsel, Nuclear  
DCD - Licensing  
T. J. Tulon, Site Vice President  
G. Barnes, Quad Cities Station Manager  
W. Beck, Regulatory Affairs Manager  
W. Leach, Manager - Nuclear  
Vice President - Law and Regulatory Affairs  
Mid American Energy Company  
M. Aguilar, Assistant Attorney General  
Illinois Department of Nuclear Safety  
State Liaison Officer, State of Illinois  
State Liaison Officer, State of Iowa  
Chairman, Illinois Commerce Commission

ADAMS Distribution:

AJM  
DFT  
SNB (Project Mgr.)  
R. Mathew, NRR  
J. Caldwell, RIII  
G. Grant, RIII  
B. Clayton, RIII  
SRI Quad Cities  
C. Ariano (hard copy)  
DRP  
DRSIII  
PLB1  
JRK1  
BAH3

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-254, 50-265  
License Nos: DPR-29, DPR-30

Report No: 50-254/01-06(DRS), 50-265/01-06(DRS)

Licensee: Exelon Generation Co., LLC

Facility: Quad Cities Nuclear Power Station, Units 1 and 2

Location: 22710 206th Avenue North  
Cordova, IL 61242

Dates: March 5 - 9, 2001

Inspector: D. Schrum, Reactor Engineer

Approved by: John M. Jacobson, Chief  
Mechanical Engineering Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000254-01-06(DRS), IR 05000265-01-06(DRS), on 03/05-03/09/2001, Exelon Generation Co., LLC, Quad Cities Nuclear Power Station, Units 1 & 2. Maintenance Rule Implementation.

The report covers a five day period of announced inspection by a regional reactor engineer. The significance of most/all findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "no color" or by the severity level of the applicable violation. 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>.

### **REACTOR SAFETY**

#### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

No findings of significance were identified.

## Report Details

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

#### 1R12 Maintenance Rule Implementation (71111.12B)

##### a. Inspection Scope

The objective of the inspection was to:

- Verify that the periodic evaluation was completed within the time restraints defined in the Maintenance Rule (once per refueling cycle, not to exceed two years), ensuring that the licensee reviewed its goals, monitoring, preventive maintenance activities, industry operating experience, and made appropriate adjustments as a result of that review;
- Verify that the licensee balanced reliability and unavailability during the previous refueling cycle, including a review of safety significant structures, systems, and components (SSC);
- Verify that (a)(1) goals were met, corrective action was appropriate to correct the defective condition including the use of industry operating experience, and (a)(1) activities and related goals were adjusted as needed; and
- Verify that the licensee has established (a)(2) performance criteria, examined any SSCs that failed to meet their performance criteria, or reviewed any SSCs that have suffered repeated maintenance preventable functional failures including a verification that failed SSCs were considered for (a)(1).

The SSCs selected for the inspection sample were the feedwater system, standby liquid control system, emergency diesel generator system, and reactor building ventilation system.

The inspector reviewed Maintenance Rule related corrective actions for systems placed in (a)(1) to verify the identification of problems at an appropriate threshold. The inspectors also verified that the corrective actions were appropriate.

##### b. Findings

No findings of significance were identified.

### 4. OTHER ACTIVITIES

#### 4OA6 Management Meetings

##### Exit Meeting Summary

The inspectors presented the inspection results to Mr. Tulon and other members

of licensee management at the conclusion of the inspection on March 9, 2001. The licensee acknowledged the information presented and did not identify any as proprietary.



## PARTIAL LIST OF PERSONS CONTACTED

### Commonwealth Edison (ComEd)

E. Anderson, Radiation Protection Manager  
W. Beck, Regulatory Assurance Manager  
G. Boerschig, Engineering Manager  
R. Chrzanowski, Nuclear Oversight Manager  
P. Fitten, System Engineering  
T. Fuhs, Regulatory Assurance  
A. Lewis, System Engineering  
M. McDowell, Operations Manager  
M. Perito, Maintenance Manager  
M. Strait, Diesel Generator Engineer  
D. Tubbs, MidAmerica Energy Representative  
T. Tulon, Site Vice President  
J. Van Pelt, Site Maintenance Rule Coordinator

### Illinois Department of Nuclear Safety (IDNS)

R. Ganser, Resident Inspector

### Nuclear Regulatory Commission

C. Miller, Senior Resident Inspector

## ITEMS OPENED, CLOSED, AND DISCUSSED

None

## LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
EDG	Emergency Diesel Generator
FF	Functional Failure
MPFF	Maintenance Preventable Functional Failure
MR/Mrule	Maintenance Rule
NRC	Nuclear Regulatory Commission
PRA	Probabilistic Risk Assessment
PSA	Probabilistic Safety Assessment
RMPFF	Repetitive Maintenance Preventable Functional Failure
SSC	Structure, System, or Component
SBLC	Standby Liquid Control

## INSPECTION PROCEDURES USED

71111.12B - Maintenance Rule Implementation

### LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion on this list does not imply that 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.

#### Procedures

ER-AA-310, Maintenance Rule, Revision 0  
NES-G-15.01, Maintenance Rule: Scoping Standard, Revision 0  
NES-G-15.02, Maintenance Rule: Risk Significance Determination Standard, Revision 0  
NES-G-15.03, Maintenance Rule: Performance Criteria Determination Standard, Revision 0  
NES-G-15.04, Maintenance Rule: System Monitoring Standard, Revision 1  
NES-G-15.05, Maintenance Rule: Goal Setting Standard, Revision 0  
NES-G-15.06, Maintenance Rule: Periodic Assessment Standard, Revision 0

#### MR Performance Criteria

MR Performance Criteria Z5706, Battery Room Ventilation - Maintain the Battery Room Temperature > 65 Degree and Prevent Hydrogen Buildup  
MR Performance Criteria Z7900-01, Provide Lighting to Routes of Access for Safe Shutdown Crews and Provide Lighting for Safe Shutdown Equipment Manipulation  
MR Performance Criteria Z5704, Trip the Fans Automatically and Close the Isolation Dampers on a Secondary Containment Isolation Signal  
MR Performance Criteria for Feedwater System, SBLC System, EDG System, and Reactor Building Ventilation Systems

#### Miscellaneous

Quad Cities Station Maintenance Rule (a)(3) Periodic Assessment, July 31, 2000  
Site Engineering Department, Focus Area Self-Assessment, Review of Mrule (a)(3) Assessment, February 14, 2001  
Quad Cities PSA Summary Document Model 99A QC-PSA-013, October 18, 1999  
Calculation No. QDC-0201-N-0469, PSA Basis for Maintenance Rule Performance Criteria, Revision 6  
Memorandum From W. H. Bohlke, Maintenance Rule - Emergency Lighting Performance Criteria, September 1, 1999  
Documentation for MR Corrective Actions for (a)(1) System Goals  
MR System Engineering Monthly Evaluations for Feedwater System, SBLC System, EDG System, and Ventilation Systems  
List of FFs, Unavailability, MPFFs, and RMPFFs for the Period February 28, 1998 to Present for the Feedwater System, SBLC System, EDG System and Ventilation

## Systems

List of MR Systems Removed From Scope

List of MR Systems Returned to (a)(2) Status from (a)(1)

List of MR Systems Moved into (a)(1)

List of Maintenance Rule System Status for Risk Significant and Non-Risk Significant Systems

List of MR Performance Criteria Changes for the Years 1999, 2000, and 2001

Copies of MPFF Evaluations for the Period February 27, 1998, to the Present for the Feedwater System, SBLC System, EDG System, and Reactor Building Ventilation Systems

Documentation for MR Corrective Actions for (a)(1) System Goals