July 5, 2000

Mr. Oliver D. Kingsley
President, Nuclear Generation Group
Commonwealth Edison Company
ATTN: Regulatory Services
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: BYRON - NRC INSPECTION REPORT 50-454/2000008(DRS);
50-455/2000008(DRS)

Dear Mr. Kingsley:

On June 9, 2000, the NRC completed an inspection at your Byron Units 1 and 2 reactor facilities. The results of this inspection were discussed on June 9, 2000, with Mr. Levis and other members of your staff. The enclosed report presents the results of that inspection.

The inspection was an examination of activities conducted under your license as they related to 10 CFR 50.59 screenings and evaluations, the corrective action process relating to 10 CFR 50.59 discrepancies, and compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records and interviews with personnel.

There were no findings identified during this inspection.

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).

Sincerely,

/RA by Ronald Gardner Acting for

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

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

Enclosure: Inspection Report 50-454/2000008(DRS);
50-455/2000008(DRS)

See Attached Distribution

cc w/encl: D. Helwig, Senior Vice President, Nuclear Services
C. Crane, Senior Vice President, Nuclear Operations
H. Stanley, Vice President, Nuclear Operations
R. Krich, Vice President, Regulatory Services
DCD - Licensing
W. Levis, Site Vice President
R. Lopriore, Station Manager
B. Adams, Regulatory Assurance Manager
M. Aguilar, Assistant Attorney General
State Liaison Officer
State Liaison Officer, State of Wisconsin
Chairman, Illinois Commerce Commission

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

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

Enclosure: Inspection Report 50-454/2000008(DRS);
50-455/2000008(DRS)
See Attached Distribution
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NAME	GO'Dwyer/jb		JJacobson		MJordan			
DATE	07/03/00		07/05/00		07/03/00			

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cc w/encl: D. Helwig, Senior Vice President, Nuclear Services
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H. Stanley, Vice President, Nuclear Operations
R. Krich, Vice President, Regulatory Services
DCD - Licensing
W. Levis, Site Vice President
R. Lopriore, Station Manager
B. Adams, Regulatory Assurance Manager
M. Aguilar, Assistant Attorney General
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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:	50-454/2000008(DRS); 50-455/2000008(DRS)
Licensee:	Commonwealth Edison Company
Facility:	Byron Nuclear Plant, Units 1 and 2
Location:	4450 North German Church Road Byron, IL 61010
Dates:	June 5 - 9, 2000
Inspector:	Gerard O'Dwyer, Reactor Engineer
Approved by:	John M. Jacobson, Chief Mechanical Engineering Branch Division of Reactor Safety

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

The report covers a one-week announced inspection by a regional reactor engineer. This inspection assessed 10 CFR 50.59 screenings and evaluations selected from risk significant systems and covering activities such as modifications, procedure revisions, calculations, Updated Final Safety Analysis Report (UFSAR) changes, tests and non-routine operating configurations. The inspection also assessed the corrective action process relating to 10 CFR 50.59 discrepancies. There were no findings identified during this inspection.

Report Details

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems and Barrier Integrity

1R02 Evaluation of Changes, Tests or Experiments (Attachment 71111.02)

a. Inspection Scope

The inspector reviewed twelve full evaluations to verify that changes to the facility or procedures as described in the UFSAR and tests not described in the UFSAR were reviewed and documented in accordance with 10 CFR 50.59. The inspector also reviewed twelve screenings that concluded that full evaluations were not necessary. The majority of these pertained to the mitigating systems cornerstone as recommended by the inspection procedure. The remainder addressed either the initiating events or barrier integrity cornerstones. The documents reviewed were selected based on the inspection procedure guidance and on risk-informed component rankings from the licensee's Probabilistic Risk Analysis. The documents reviewed have been specified in the attached list.

b. Findings

An unresolved item was identified concerning evaluation 6G-00-0074 of the licensee's plan to dewater one of the two intake bays of the Rock River screenhouse to repair the bay's traveling screens and other maintenance. This would require that water be channeled to one of the Essential Service Water (SX) makeup pumps through an abnormal route. Licensee personnel determined in Calculation BYR2000-069 that the abnormal route would raise the minimum required river level for that SX makeup pump to 666 feet Mean Sea Level (MSL). Licensee personnel realized that this contradicted the bases for Technical Specification (TS) 3.7.9.E which stated that the minimum required river level for the SX makeup pumps was 664.7 feet MSL. The licensee's evaluation concluded that if the dewatering was to have been permanent, TS 3.7.9.E would have needed to be changed to require higher river levels and flows. However, the evaluation concluded that since the dewatering was a temporary change, a license amendment was not needed. The inspector noted that the dewatering would make TS 3.7.9.E non-conservative. The inspector did not have any safety concerns since the licensee committed to institute administrative limits during the dewatering to ensure that an equivalent margin of safety was maintained. Also, the inspector was informed that the river level was at 676 feet MSL which was ten feet higher than the minimum required. The inspector requested guidance from NRR to determine if the temporary change needed prior NRC approval. This item will be tracked as unresolved item (URI) (50-454/2000008-01(DRS); 50-455/2000008-01(DRS)) pending completion of NRR review.

No findings were identified in this area.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed 22 Problem Identification Forms (PIF) concerning 10 CFR 50.59 issues to verify that the licensee had an appropriate threshold for identifying issues. The inspector also evaluated the effectiveness of the corrective actions for the identified issues. These PIFs were selected based on the inspection procedure guidance and risk-informed component rankings from the licensee's Probabilistic Risk Analysis. The selected PIFs have been specified in the attached list of documents reviewed.

b. Findings

No findings were identified in this area.

4OA6 Management Meetings

Exit Meeting Summary

The inspector presented the inspection results to Mr. Levis and other members of licensee management at the conclusion of the inspection on June 9, 2000. The licensee acknowledged the results of the inspection. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. Stauffer, Regulatory Assurance
*R. Colglazier, Compliance Engineer
*J. Dubon, Licensing Engineer
*D. Wozniak, Engineering Director
*R. Mancini, Site Engineer, Lead - Rapid Response Team
*B. Adams, Regulatory Assurance Manager
*W. Levis, Site Vice President

NRC

*J. Jacobson, Chief, Mechanical Engineering Branch
*B. Kemker, Resident Inspector

*Denotes those who attended the exit interview conducted on June 9, 2000.

INSPECTION PROCEDURES USED

IP 71111.02	"Changes, Tests, or Experiments"
IP 71152	“Identification and Resolution of Problems” (reference)

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-454/2000008-01(DRS); 50-455/2000008-01(DRS)	URI - NRR review of 10 CFR 50.59 evaluation of dewatering activity

Closed

None

Discussed

None

LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
MSL	Mean Sea Level
NRC	U. S. Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
PERR	(NRC) Public Electronic Reading Room
PIF	Problem Identification Form
SX	Emergency Service Water
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Issue

PARTIAL LIST OF DOCUMENTS REVIEWED

The following is a partial 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.

Problem Identification Forms

B1999-01645	Concerns with Reactor Coolant System Loose Parts 50.59
B1999-03965	Safety Screening Performed for Activity Requiring Safety Evaluation
B1999-04058	Potential Trend for the 50.59 Program
B1999-04146	NON BW-99-054, Conflicting Procedural Guidance for 10 CFR 50.59 Safety Evaluations (NO)
B1999-04147	“Change of Intent” Definition Unknown Per Reg Assurance Managers
B1999-04621	Nuclear Oversight Identified TRM Change Deficiencies
B2000-00233	Nuclear Oversight Identified Deficiency on 50.59 Evaluation 6G-99-0023
B2000-00235	Nuclear Oversight Identified 50.59 Deficiency on 6G-99-0016
B2000-00379	Ineffective 50.59 Review of OOS Past 180 Days.
B2000-00817	Failure to Validate a Braidwood 50.59 Transferring TRM Requirements to Procedures
B2000-00980	50.59 Safety Evaluation Graded “3"
B2000-01085	NON DR-00-029, Adverse Trend Identified in 50.59 Screening Process
B2000-01300	Required 50.59 Review Not Performed for T&D Procedures Used in Switchyard by Substation
B2000-01345	QRT Review Found Discrepancy in 50.59 Validation (6H-00-0023)
B2000-01477	50.59 Screening for Editorial Changes Not Consistent With Procedure Requirement
B2000-01476	Inadequate Guidance for PORC Review of 50.59 Evaluations
B2000-01479	10 CFR 50.59 Annual Summary Report Preparation Guidance Problems
B2000-01345	QRT Review Found Discrepancy in 50.59 Validation (6H-00-0023)
B2000-01510	50.59 Qualification: 2 Year Refresh Requirements
B2000-01508	50.59 Qualification Material: Lack of Evidence of Approval Before Use
B2000-01501	Improper Use of the 50.59 and Out of Service (OOS) Processes
B2000-01593	Deficiencies in 50.59 Validation Responses

Procedures

NSP-AP-4004	Corrective Action Program Procedure, Revision 4
NSP-CC-3001	Operability Determination Process, Revision 0
NSP-CC-3011	UFSAR and Fire Protection Report Update Procedure, Revision 1 November 12, 1998
RS-AA-104	10 CFR 50.59 Safety Evaluation Process, Revision 0, August 9,1999

10 CFR 50.59 Screenings and Evaluations

SCREENINGS FOR FACILITY CHANGES

6E-99-0209	DCP 9800543, 544, DG, Replace DC - DC Converters PS1 and PS2 in DG Panels, 7/15/99
6E-99-0226	DCPs 9800434, 435, & 436, B1R10, 11, 12, Add Larger Condenser Access Covers to U1, CD, 8/13/99
6E-99-0227	DCP 9900203, U2 Install Pipe Clamp Support to Restrict Vibration on 2RC8029, RC, U1 Done by DCP 990157, 8/18/99
6E-99-229	DCPs 9800618 & 619, AF - Modify Engine Support, 2/24/99
6E-99-302	DCP 990118 &119, U1&2, Add Resistor to Rod Drive Power Cabinet Power Supply Output, 9/29/99

SCREENINGS FOR PROCEDURE CHANGES OR TESTS

6D-99-1163	1/2BVSR SX-11, 11/12/99
6D-99-1256	Special Process Procedure 99-043, U2 PZR BU HTR, 12/13/99
6D-00-0017	BOP AP-8, Revision 4, 01/11/00
6D-00-0038	1BVSR OAD-5, R0, 02/21/00
6D-00-0044	BOP AF-1, BOP AF-7, etc., 01/12/00
6D-00-0085	1/2BVSR 5.5.8.AF1-2 , 02/01/00
6D-00-0098	½ BOSR 0.5-3.AF, 1-1,2 , 02/07/00

FULL 10 CFR 50.59 EVALUATIONS

6G-99-0098	DCPs 9900162&161, SI System High Point Vents, 05/21/99
6G-99-0127	BY2C9 Reload Design, 10/05/99
6G-99-0130	Special Process Procedure 99-026, Check PZR Bypass Valve Checks, 10/14/99
6G-99-0161	DCPs 98-482-485 Replace SI Kerotest Valves With A/D, 08/25/99
6G-99-0188	DRP-8-086, SX Makeup Pump Temperature, 10/11/99
6G-99-0239	TMOD 99-2-046, Install Valve Block to Lock 2SX147A Open, 12/13/99
6G-99-0240	DCP 9900289, 9900290. [SI8802A New Gear Ratios], 12/29/99
6G-00-0018	Relocations from TRM to Procedures, 04/11/00
6G-00-0024	TMOD DCP9900398 2CC99C11/2," Threaded Pipe Cap, 01/13/00
6G-00-0074	TMOD DCP 9900492, Install Stop Logs in 0A Intake Bay, 04/25/00
6H-99-0243	Add New SI High Point Vents to the Listed Procedures, 06/02/99
6H-99-0396	Change Jacket Water References in Various Documents, 11/30/99

Miscellaneous Documents

BYR-454-201-99-CAQ0135, 06/06/00, NTS General Report
Calculation BYR2000-069, Revision 00, Required Rock River Levels and Flows with Stop Logs Installed