April 15, 2005

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

SUBJECT: BRAIDWOOD STATION, UNITS 1 AND 2
NRC EVALUATION OF CHANGES, TESTS, OR EXPERIMENTS, AND PERMANENT PLANT MODIFICATIONS BASELINE INSPECTION REPORT 05000456/2005006(DRS); 05000457/2005006(DRS)

Dear Mr. Crane:

On March 18, 2005, the US Nuclear Regulatory Commission (NRC) completed a combined baseline inspection of Evaluation of Changes, Tests, or Experiments, and Permanent Plant Modifications at the Braidwood Station. The enclosed report documents the inspection findings, which were discussed on March 18, 2005, with Mr. G. Boerschig and other members of your staff at the completion of the inspection.

The inspectors 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.

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

In accordance with 10 CFR 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 http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA by Ann Marie Stone Acting for/

David E. Hills, Chief
Materials Engineering Branch
Division of Reactor Safety

Docket Nos. 50-456; 50-457
License Nos. NPF-72; NPF-77

Enclosure: Inspection Report 05000456/2005006(DRS); 05000457/2005006(DRS)
w/Attachment: Supplemental Information

cc w/encl: Site Vice President - Braidwood Station
Plant Manager - Braidwood Station
Regulatory Assurance Manager - Braidwood Station
Chief Operating Officer
Senior Vice President - Nuclear Services
Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director Licensing
Manager Licensing - Braidwood and Byron
Senior Counsel, Nuclear, Mid-West Regional
Operating Group
Document Control Desk - Licensing
Assistant Attorney General
Illinois Department of Nuclear Safety
State Liaison Officer
Chairman, Illinois Commerce Commission

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Vice President - Operations Support
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Manager Licensing - Braidwood and Byron
Senior Counsel, Nuclear, Mid-West Regional
Operating Group
Document Control Desk - Licensing
Assistant Attorney General
Illinois Department of Nuclear Safety
State Liaison Officer
Chairman, Illinois Commerce Commission

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-456; 50-457
License Nos:	NPF-72; NPF-77
Report No:	05000456/2005006(DRS); 05000457/2005006(DRS)
Licensee:	Exelon Generation Company, LLC
Facility:	Braidwood Station, Units 1 and 2
Location:	35100 S. Route 53 Suite 79 Braceville, IL 60407-9617
Dates:	March 14 through March 18, 2005
Inspectors:	H. Walker, Engineering Inspector, Lead A. Dunlop, Engineering Inspector G. O'Dwyer, Engineering Inspector
Observer:	A. Dahbur, Engineering Inspector
Approved by:	D. E. Hills, Chief Materials Engineering Branch Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000456/2005006(DRS); 05000457/2005006(DRS); 3/14/2004 - 3/18/2004; Braidwood Station, Units 1 and 2; Evaluation of Changes, Tests, or Experiments (10 CFR 50.59), and Permanent Plant Modifications.

The report covers a one-week announced baseline inspection on evaluations of changes, tests or experiments and permanent plant modifications. The inspection was conducted by three region based inspectors. No findings of significance were 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

No findings of significance were identified.

B. Licensee-Identified Violations

No findings of significance were identified.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R02 Evaluations of Changes, Tests, or Experiments (71111.02)

.1 Review of 10 CFR 50.59 Evaluations and Screenings

a. Inspection Scope

From March 14 through 18, 2005, the inspectors reviewed seven evaluations performed pursuant to 10 CFR 50.59. The evaluations related to permanent plant modifications, setpoint changes, procedure changes, conditions adverse to quality, and changes to the updated final safety analysis report. The inspectors reviewed the evaluations to verify that the evaluations were thorough and that prior NRC approval was obtained as appropriate. The inspectors also reviewed 28 screenings where the licensee had determined that a 10 CFR 50.59 evaluation was not necessary. In regard to the changes reviewed where no 10 CFR 50.59 evaluation was performed, the inspectors verified that the changes did not meet the threshold to require a 10 CFR 50.59 evaluation. These evaluations and screenings were chosen based on risk significance of samples from the different cornerstones. The list of documents reviewed by the inspectors is included as an attachment to this report.

The inspectors used, in part, Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Implementation," Revision 1, to determine acceptability of the completed evaluations and screenings. The NEI document was endorsed by the NRC in Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," dated November 2000. The inspectors also consulted Part 9900 of the NRC Inspection Manual, "10 CFR Guidance for 10 CFR 50.59, Changes, Tests, and Experiments."

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17B)

a. Inspection Scope

From March 14 through March 18, 2005, the inspectors reviewed 12 permanent plant modifications that had been installed in the plant during the last two years. The modifications were chosen based upon their effect on systems that had high probabilistic risk analysis (PRA) significance in the licensee's Individual Plant Evaluation (IPE) or high maintenance rule safety significance. The inspectors reviewed the modifications to verify that the completed design changes were in accordance with the specified design requirements and the licensing bases and to confirm that the changes

did not affect any systems' safety function. Design and post-modification testing aspects were verified to ensure the functionality of the modification, its associated system, and any support systems. The inspectors also verified that the modifications performed did not place the plant in an increased risk configuration.

The inspectors also used applicable industry standards to evaluate acceptability of the modifications. The list of documents reviewed by the inspectors is included as an attachment to this report.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems

.1 Routine Review of Condition Reports

a. Inspection Scope

From March 14 through 18, 2005, the inspectors reviewed 13 condition reports that were written by licensee personnel to enter the issues in the corrective action program. The inspectors reviewed these findings to verify an appropriate threshold for identifying issues and to evaluate the effectiveness of corrective actions related to the permanent plant design and evaluations for Changes, Tests, or Experiments issues. In addition, four condition reports, written on issues identified during the inspection, were reviewed to verify adequate problem identification and incorporation of the problems into the corrective action system. The specific corrective action documents that were sampled and reviewed by the team are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. G. Boerschig, and other members of licensee management on March 14, 2005. The licensee acknowledged the inspection results presented.

The inspectors acknowledged that several documents reviewed during the inspection were identified as proprietary. These documents were returned to licensee personnel and the proprietary information is not contained in this report. Licensee personnel were asked to identify any documents, materials, or information provided during the inspection that were considered proprietary. No proprietary information was identified.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee
K. Polson, Site Vice President
G. Boerschig, Plant Manager
D. Ambler, Regulatory Assurance Manager
R. Belair, Senior Design Engineer
S. Butler, Regulatory Assurance
D. Gustafson, Plant Engineering Manager
D. Ibrahim, Senior Design Engineer
R. John, Nuclear Oversight Assessor
F. Lentine, Design Engineer Manager
D. Riedinger, Design Engineering Electrical and I&C Manager
M. Smith, Site Engineering Director

Nuclear Regulatory Commission
N. Shah, Acting Senior Resident Inspector
L. Haeg, Resident Inspector
D. Hills, Chief, Material Engineering Branch
A. Stone, Chief, System Engineering Branch

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

None.

Discussed

None.

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. Inclusion of a document in this list does not imply NRC acceptance of the document, unless specifically stated in the inspection report.

Modifications

EC042096; 1DG01SA-D, Replace Diesel Gen Start Air Dryer w/New Model; Revision 2

EC042864; Elimination of Actuators for the Supply and Exhaust Isolation Dampers for the Computer Rooms; Revision 0

EC 344307, U2; AF Pump Diesel Governor Oil Reservoir Relocation; dated November 19, 2003

EC346617; Revise Setpoint for the Pressurizer Safety Valves from 2485 psig to 2460 psig; Revision 0

EC 0347396; Replace CS RCFC Internal Plate Baffle and Curved Baffle with SS; Revision 2

EC 0341358; EH Fluid Metallic Flex Hose Replacements; Revision 0

1/2 BwOA SEC-1; Secondary Pump Trip; Revision 101; dated December 6, 2003

EC0000350599; Revise Instantaneous Magnetic Trip Setpoint for MCCB 1AP23E-F5; dated October 20, 2004

EC0000342974; Installation of OVC312Y Damper in a Correct Configuration; dated October 4, 2004

EC000042496; Replace DC-DC Converter PS1 & PS2.2B DG Control Panel 2PL08J; dated February 25, 2004

EC0000336417; Resolve Breaker Size Issue for 120V Penetration Protection; dated April 13, 2004

EC0000343885; Alternate Locking Device for Blower Drive Shaft Sleeve; dated March 23, 2004

50.59 Safety Evaluations

BRW-SE-2000-975; 1DG01SA-D, Replace Diesel Gen Start Air Dryer w/New Model; dated September 20, 2000

BRW-E-2003-218; AMAG Implementation Using FW Header Flow; Revision 3

BRW-E-2003-220; UFSAR Update Addressing Revised Structural Component Criterion; dated September 15, 2003

BRW-E-2003-229; TRM Change #03-015 Change minimum Incore Decay Time for A2R10 from 100 hrs to 65 hrs, (TRM Section 3.9.a); Revision 0

BRW-E-2004-183; Change IN-Core Decay Timer for A1R11

BRW-E-2004-272; Revise Setpoint for 1C Flash Tank Emergency Level Controller and Low Level Alarm

BRW-E-2005-011; TCCP #353321 and Associated Procedure Revisions; Revision 0

50.59 Screenings

BRW-S-2003-74; Remove Actuators from the Computer Rooms' Supply and Exhaust Isolation Dampers (0VV62Y-0VV69Y); Revision 0

BRW-S-2003-236; Revise Setpoint for 2PS-DG094B, DG 2B Starting Air Compressor 2DG01SB-B Control Pressure Switch; Revision 0

BRW-S-2003-223; Revise UFSAR section 6.5.2.2, RHR Friction Loss; Revision 0

BRW-S-2003-246; Screening for MOD EC 344307; Revision 0

BRW-S-2003-268; Install an Alternate Discharge Path for 1VA01SA-1A/2VA01SA-2A Cubicle Coolers and 1SX01AA/2SX01AA SX Pump Oil Coolers; Revision 0

BRW-S-2003-280; UFSAR Change/DRP 10-053; Revision 0

BRW-S-2003-282; BwOP AF-M2 Operation Mechanical Lineup Unit 2; Revision 0

BRW-S-2003-302; Revised 1/2BwOA SEC-1 to Manually Trip the Reactor if FW Flow Can Not Be Restored to Greater than Steam Flow and Reactor Is Greater than 95 Percent Power; Revision 0

BRW-S-2004-014; Replace Diesel Generator Starting Air Dryer 2DG01SA-C with New Model; Revision 0

BRW-S-2004-018; Revise UFSAR to Reflect Active Valve Status of 1/2AF013A-H; Revision 0

BRW-S-2004-43; Revise UFSAR to Address Various Outstanding Design Basis Initiative (DBI) Open items (UFSAR Draft Revision Package 8-173, Revision 1); Revision 0

BRW-S-2004-068; BwOP CC-8, Isolation of CC Between Units 1 and 2, Revision 17; Revision 0

BRW-S-2004-125; Installation of Instrument Air (IA) System Filters on Feedwater (FW) Regulating Valve Actuators; Revision 0

BRW-S-2004-134; Revised 1/2BwOSR 3.1.1.1-1 to Incorporate the 12-hour and 4-hour Short Form Added Step to Calculate Cooldown SDM; Revision 0

BRW-S-2004-169; BwOP DG-11 and 12 Revised to Add Steps for Emergency Shutdown of the DG; Revision 0

BRW-S-2004-224; Containment Mini-Purge System Operation; Revision 0

BRW-S-2003-250; Surveillance Requirement for A and B Centrifugal Charging Pump Discharge Pressure

BRW-S-2003-259; Change Existing Magnetic Trip Setting for Breaker 232X3-D3

BRW-S-2003-296; Lift Leads of Core Exit Thermocouple (CETC) 2TE-IT8001M in Panel 2PA51J

BRW-S-2004-8; Circulating Water Pump Discharge Valve Close Circuit Enhancement

BRW-S-2004-37; Essential Service Water Pump Startup Swapping Essential Service Water Pumps

BRW-S-2004-71; DC Ground Detector Replacement

BRW-S-2004-146; Eagle Signal Timer Replacement for ESF Safe Shutdown Timers

BRW-S-2004-199; Fail Open 2A Auxiliary Feedwater Pump Oil Cooler Outlet Isolation Valve 2SX101A

BRW-S-2004-225; Revise the Byron/Braidwood UFSAR to Incorporate an Administrative Change

BRW-S-2004-236; Change the Sudden Pressure Relay Trip Logic for Unit Auxiliary Transformer 141-2 from a Two-out-of-Two (2/2) Scheme to a One-out-of-One Scheme

BRW-S-2005-10; Temporary Disable the #4 Sensor of the 2B RVLIS Probe

BRW-S-2005-13; UFSAR Change Package (DRP) #11-013 Revision to Description of Natural Circulation Cooldown Analysis; Revision 0

Condition Reports Initiated as a Result of the Inspection

313837; UFSAR Text Does Not Accurately Reflect Analysis; dated March 17, 2005

314163; Accumulation of Leaked Oil on the North Side of 1DG01KA; dated March 17, 2005

314361; Issues Identified with Completeness of 50.59 Screening; dated March 18, 2005

314478; NRC Inspector Identifies Error on Drawing 20E-1-4030MP01; dated March 18, 2005

Condition Reports

306366; Elevated Dewpoint in 1A DG Receiver 1DG01SA-TC; dated February 28, 2005

306472; FASA Finding - Trend Codes not Entered for DCP Revisions; dated February 28, 2005

302875; Degraded Wiring in ACB BT 3-4 Alarm Circuit; dated February 28, 2005

306451; FASA Finding - Deficient 50.59 Screening; dated February 28, 2005

AR00306454; FASA Finding - Deficient 50.59 Screening; dated February 28, 2005

AR00306462; FASA Finding - Deficient 50.59 Screening; dated February 28, 2005

AR00297824; Similarity DQ Evaluation Conflict; dated February 4, 2005

AR00312621; Piping Analyses Did Not Include Insulation Weight; dated March 14, 2005

AR00287695; EMD Personnel Questioned Cable Splices; dated January 4, 2005

AR00306467; FASA Finding - Incorrect 50.59 Applicability Review; dated February 24, 2005

AR00303696; Incomplete Configuration Documents; dated February 21, 2005

AR00301156; 2FE-D0071 Shown on P&ID Does Not Exist; dated December 30, 2004

AR00306459; FASA Finding - Deficient 50.59 Screening; dated February 28, 2005

Drawings

20E-1-4030SX01; Schematic Diagram - Essential Service Water Pump 1A 1SX01PA; Revision U

20E-1-4030MP01; Schematic Diagram - Generator and Transformer Tripping Relays System I - Part 1; Revision Z

20E-1-4030MP02; Schematic Diagram - Generator and Transformer Tripping Relays System I - Part 2; Revision AB

20E-1-4030MP03; Schematic Diagram - Generator and Transformer Tripping Relays System II - Part 1; Revision V

20E-1-4030MP04; Schematic Diagram - Generator and Transformer Tripping Relays System II - Part 2; Revision U

20E-1-4030MP05; Schematic Diagram - Generator and Transformer Tripping Relays System II - Part 3; Revision M

M-54, Sheet 4A; Diagram of Service Air, Diesel Gen. Starting Air Unit 1; Revision I

Post-Modification Tests

D20-0-00-405-001; A-Train Control Room Ventilation Test; Revision 0, TCN #1

D20-0-00-405-002; B-Train Control Room Ventilation Test; Revision 0, TCN #1

D20-1-98-301-002-1; 1A Diesel Generator Starting Air Dryer 1DG01SA-D (#2) Testing; Revision 0, TCN #1

Procedures

BwOP CC-8; Isolation of CC Between Units 1 and 2; Revision 17

BwOP VQ-6; Containment Mini-Purge System Operation; Revision 17

BwVS 800-2; Instrument Air Sampling Requirements; Revision 6

Vendor Manual

L-0830; Membrane Air Dryer; Revision 0

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
AF	Auxiliary Feedwater
ALARA	As Low As Reasonably Achievable
ASME	American Society of Mechanical Engineers
BACC	Boric Acid Control Coordinator
BwOP	Braidwood Operating Procedure
BwOSR	Braidwood Operating Surveillance Requirement Procedure
BwVSR	Braidwood Engineering Surveillance Requirement Procedure
CFR	Code of Federal Regulations
CR	Condition Report
DG	Diesel Generator
EH	Electro-Hydraulic
HRA	High Radiation Area
IMC	Inspection Manual Chapter
ISI	Inservice Inspection
LER	Licensee Event Report
NCV	Non-Cited Violation
NOS	Nuclear Oversight
NRC	Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
PARS	Publicly Available Records
PWR	Pressurized Water Reactor
RCS	Reactor Coolant System
RP	Radiation Protection
RPV	Reactor Pressure Vessel
RWP	Radiation Work Permit
SDP	Significance Determination Process
SG	Steam Generator
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WO	Work Order