

December 1, 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: BRAIDWOOD - NRC EXAMINATION REPORT 50-456/00-301(DRS);  
50-457/00-301(DRS)

Dear Mr. Kingsley:

On November 2, 2000, the NRC completed initial operator licensing examinations at your Braidwood Nuclear Power Station. The enclosed report presents the results of the examination.

Your training department personnel administered the written examination on November 1, 2000. NRC examiners commenced administering the operating examination the week previous and completed on October 31, 2000. Four of your applicants were administered reactor operator examinations and five were administered senior reactor operator examinations. The license applicants' performance evaluations were finalized on November 28, 2000. All nine applicants passed all portions of their respective examinations and were issued corresponding reactor operator or senior reactor operator licenses.

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 questions you have concerning this inspection.

Sincerely,  
**/RA Roy J Caniano Acting for/**  
 David E. Hills, Chief  
 Operations Branch  
 Division of Reactor Safety

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

Enclosures: 1. Operator Licensing Examination Report  
                   50-456/00-301(DRS); 50-457/00-301(DRS)  
 2. Simulation Facility Report  
 3. Written Examination and Answer Key (RO and SRO)

cc w/encls 1 & 2: 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  
 T. Tulon, Site Vice President  
 K. Schwartz, Station Manager  
 T. Simpkin, Regulatory Assurance Supervisor  
 M. Aguilar, Assistant Attorney General  
 State Liaison Officer  
 Chairman, Illinois Commerce Commission

cc w/encls 1, 2 & 3: R. Coon, Training Manager

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DATE	12/01/00	12/01/00	12/01/00		

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David E. Hills, Chief  
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Division of Reactor Safety

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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: 50-456/00-301(DRS); 50-457/00-301(DRS)

Licensee: Commonwealth Edison Company

Facility: Braidwood Nuclear Plant, Units 1 and 2

Location: 35100 South Route 53  
Suite 84  
Braceville, IL 60407-9617

Examination Dates: October 23 - November 1, 2000

Examiners: M. Bielby, Chief Examiner  
G. Wilson, Examiner  
M. Sykes, Examiner

Approved by: David E. Hills  
Chief Operations 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
<ul style="list-style-type: none"><li>● Initiating Events</li><li>● Mitigating Systems</li><li>● Barrier Integrity</li><li>● Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>● Occupational</li><li>● Public</li></ul>	<ul style="list-style-type: none"><li>● Physical Protection</li></ul>

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>.

## SUMMARY OF FINDINGS

ER 05000456-00-301(DRS); ER 05000457-00-301(DRS), on 10/23-11/01/2000, Commonwealth Edison Company, Braidwood Nuclear Power Station, Units 1 and 2. Other Activities:

The announced operator licensing initial examination was conducted by regional examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 8. No significant findings were identified.

### Examination Summary:

- Four reactor operator and five senior reactor operator applicants were administered the written examination and operating tests. All nine applicants passed all portions of their respective examinations and were awarded corresponding reactor operator and senior reactor operator licenses (Section 4OA5.1).

## Report Details

### **4. OTHER ACTIVITIES (OA)**

#### 4OA5 Other

##### .1 Initial Licensing Examinations

###### a. Inspection Scope

The NRC examiners conducted announced operator licensing initial examinations during the weeks of October 23 and 30, 2000. The facility licensee's training staff used the guidance prescribed in NUREG-1021, Operator Licensing Examination Standards for Power Reactors (ES), Revision 8, Supplement 1 dated March 20, 2000, to prepare the outline, and develop the written examination and operating test. The examiners administered the operating test consisting of job performance measures (JPMs) and dynamic simulator scenarios, October 23 - 27 and 30 - 31, 2000. The facility licensee administered the written examination on November 1, 2000. Four reactor operator and five senior reactor operator applicants received written examinations and operating tests.

###### b. Findings

###### Written Examination

The NRC examiners determined that the written examination, as originally submitted by the licensee, was within the range of acceptability expected for a proposed examination.

The NRC examiners independently graded the written examination and concluded that all nine applicants achieved or surpassed the passing criteria of 80.0 percent. On November 2, 2000, the licensee noted that no post-examination comments involving correction of referenced technical information were to be submitted on the written examination.

The NRC examiners determined that the operating test, as originally submitted by the licensee, was within the range of acceptability expected for a proposed examination.

All applicants demonstrated satisfactory performance in all three areas of the operating examination (administrative, control room and systems walkthrough, and integrated plant response).

##### .2 Examination Security

###### a. Inspection Scope

The examiners reviewed and observed the licensee's implementation and controls of examination security during the examination preparation and administration.

b. Findings

The NRC examiners determined that the licensee's overall examination security practices associated with the development and administration of the operator license examinations were satisfactory.

4OA6 Management Meetings

Exit Meeting Summary

The chief examiner presented the examination team's preliminary observations and findings to Mr. Tulon and other members of the licensee management on November 2, 2000. The licensee acknowledged the observations and findings presented, and did not identify any information as proprietary.



## PARTIAL LIST OF PERSONS CONTACTED

R. Coon, Training Manager  
G. Dudek, Shift Operations Supervisor  
D. Myers, Operations Training Manager  
J. Hansen, NGG NRC Exam Coordinator  
B. Spahr, Initial License Training  
T. Simpkin, Regulatory Assurance Manager  
G. Swartz, Station Manager  
T. Tulon, Site Vice-President

## ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

None

### Closed

None

### Discussed

None

## LIST OF ACRONYMS USED

ADAMS	Agencywide Documents and Management System
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
ES	Examiner Standards
JPM	Job Performance Measures
NRC	Nuclear Regulatory Commission
OA	Other Activities
PARS	Publically Available Records
RO	Reactor Operator
SRO	Senior Reactor Operator

SIMULATION FACILITY REPORT

Facility Licensee: Braidwood Nuclear Power Station

Facility Licensee Docket No: 50-456; 50-457

Operating Tests Administered: October 23 - 27 and 30 - 31, 2000

The following documents observations made by the NRC examination team during the initial operator license examination. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

ITEM	DESCRIPTION
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1. None

Enclosure 3

WRITTEN EXAMINATION AND ANSWER KEY (RO and SRO)