

February 4, 2003

Mr. John L. Skolds, President  
Exelon Nuclear  
Exelon Generation Company, LLC  
Quad Cities Nuclear Power Station  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: QUAD CITIES NUCLEAR POWER STATION  
NRC INITIAL LICENSE EXAMINATION REPORT 50-254/02-301(DRS);  
50-265/02-301(DRS)

Dear Mr. Skolds:

On December 12, 2002, NRC examiners completed initial operator licensing examinations at your Quad Cities Nuclear Power Station. The enclosed report presents the results of the examination.

The NRC examiners administered an initial license examination operating test during the weeks of December 2 and December 9, 2002. A written examination was administered by Quad Cities Station training personnel on December 12, 2002. Four Reactor Operator (RO) and seven Senior Reactor Operator (SRO) applicants were administered license examinations. The results of the examinations were finalized on January 27, 2002. Ten applicants passed all sections of their respective examinations and were issued applicable operator licenses. One RO applicant failed the operating examination and will not be issued a reactor operator license.

In accordance with 10 CFR Part 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures 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).

We will gladly discuss any questions you have concerning this examination.

Sincerely,

***/RA by H. Peterson Acting For/***

Roger D. Lanksbury, Chief  
Operations Branch  
Division of Reactor Safety

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

- Enclosures:
1. Operator Licensing Examination  
Report 50-254/02-301(DRS); 50-265/02-301(DRS)
  2. Facility Comments and NRC Resolutions
  3. Simulation Facility Report
  4. Written Examinations and Answer  
Keys (RO & SRO)

cc w/encls 1 & 2

Site Vice President - Quad Cities Nuclear Power Station  
Quad Cities Nuclear Power Station Plant Manager  
Regulatory Assurance Manager - Quad Cities  
Chief Operating Officer  
Senior Vice President - Nuclear Services  
Senior Vice President - Mid-West Regional  
Operating Group  
Vice President - Mid-West Operations Support  
Vice President - Licensing and Regulatory Affairs  
Director Licensing - Mid-West Regional  
Operating Group  
Manager Licensing - Dresden and Quad Cities  
Senior Counsel, Nuclear, Mid-West Regional  
Operating Group  
Document Control Desk - Licensing  
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  
W. Leach, Manager of Nuclear  
MidAmerican Energy Company

cc w/encls 1, 2, 3, & 4: R. Armitage, Training Manager.

We will gladly discuss any questions you have concerning this examination.

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 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  
 W. Leach, Manager of Nuclear  
 MidAmerican Energy Company

cc w/encls 1, 2, 3 & 4: R. Armitage, Training Manager

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-254/02-301(DRS); 50-265/02-301(DRS)

Licensee: Exelon Nuclear

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

Location: 22710 206th Avenue North  
Cordova, IL 61242

Dates: December 2 through December 6, 2002  
December 9 through December 12, 2002

Examiners: H. Peterson, Chief Examiner  
C. Phillips, Examiner  
P. T. Young, Examiner  
C. Zoia, Examiner-in-Training (Observer)

Approved by: Roger D. Lanksbury, Chief  
Operations Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

ER 05000254-02-301(DRS), 05000265-02-301(DRS); Exelon Company; on 12/02-12/12/02; Quad Cities Nuclear Power Station. Initial License Examination Report.

The announced operator licensing initial examination was conducted by regional NRC examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 8, Supplement 1.

### Examination Summary:

- Ten applicants passed all sections of their respective examinations and were issued applicable operator licenses. One Reactor Operator applicant failed the operating examination and was not issued a Reactor Operator license (Section 4OA5.1).

## Report Details

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

#### 4OA5 Other

##### .1 Initial Licensing Examinations

###### a. Examination Scope

The NRC examiners conducted an announced operator licensing initial examination during the weeks of December 2 and December 9, 2002. The facility's training staff used the guidance established in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 8, Supplement 1, to prepare the examination outline and to develop the written examination and operating test. The NRC examiners administered the operating test during the weeks of December 2 and December 9, 2002. Quad Cities Station training staff members administered the written examination on December 12, 2002. Four Reactor Operator and seven Senior Reactor Operator applicants were examined.

###### b. Findings

###### Written Examination

The licensee developed the written examination. During their initial review, the examiners determined that the examination, as submitted by the licensee, was within the range of acceptability expected for a proposed examination. During examination validation the week of November 12, 2002, examination changes agreed upon between the NRC and the licensee were incorporated according to the guidance contained in NUREG-1021.

The licensee had one post examination comment on the written examination. The post examination comment and NRC resolution is documented in enclosure 2.

###### Operating Test

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. Examination changes, agreed upon between the NRC and the licensee, were made during the validation week in accordance with NUREG-1021 guidance.

###### Examination Results

Four Reactor Operator applicants and seven Senior Reactor Operator applicants were administered written examinations and operating tests for initial operator licensing. Ten applicants passed all sections of their respective examinations and were issued applicable operator licenses. One Reactor Operator applicant failed the operating examination and was not issued a Reactor Operator license.

.2 Examination Security

a. Scope

The NRC examiners briefed the facility contact on the NRC's requirements and guidelines related to examination physical security (e.g., access restrictions and simulator considerations) and integrity (e.g., predictability and bias). The examiners also reviewed the facility licensee's examination security procedure, the corrective actions related to any past examination security problems at the facility, and the implementation of security and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the examination process.

b. Findings

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

4OA6 Meeting(s)

Exit Meeting

The chief examiner presented the examination team's preliminary observations and findings on December 12, 2002, to Mr. Gideon and members of the Operations and Training Department staff. The licensee acknowledged the observations and findings presented. No proprietary information was identified during the examination or the exit meeting.



## KEY POINTS OF CONTACT

### Licensee

R. Gideon, Acting Plant Manager  
R. Armitage, Training Manager  
W. Beck, Regulatory Assurance Manager  
M. Perito, Operations Manager  
M. Snow, Nuclear Oversight Manager  
J. Bartlett, Operations Training Manager  
J. Ferdinand, Initial License Training Lead  
D. Snook, Licensed Operator Requalification Training Lead  
S. Russell, Corporate Examination Coordinator  
K. Moreland, Initial Examination Author  
G. Thennes, Initial Examination Co-Author  
M. Swegle, Unit Supervisor, Facility Representative

### NRC

K. Stoedter, Senior Resident Inspector  
M. Kurth, Resident Inspector

## ITEMS OPENED, CLOSED AND DISCUSSED

### Opened

None

### Closed

None

### Discussed

None

## LIST OF ACRONYMS USED

ADAMS	Agency-Wide Document Access and Management System
DRS	Division of Reactor Safety
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
RO	Reactor Operator
SRO	Senior Reactor Operator

Facility Comments and NRC ResolutionsWritten Examination Record Number 79 (RO Examination Question Number 79):

Given a set of plant parameters describing the condition of an Anticipated Transient Without Scram (ATWS) with certain equipment out-of-service (OOS), the applicant was asked to determine the expected response when an operator takes action to place the Standby Liquid Control (SBLC) initiation switch to the SYS 1 & 2 position.

Facility Comment:

The facility licensee commented that the RO examination question 79 asked for the expected response when taking the initiation switch to the SYS 1 & 2 position with the 2A SBLC pump breaker OOS. The facility indicated that when the applicant's training class was originally taught SBLC, the squib valves were powered from their respective SBLC pump breaker. However, during the recent 2002 refuel outage on Unit 2, a modification was installed to power the squib valve from a separate breaker other than the 2A SBLC pump breaker. Subsequently, the applicant's training class was taught all of the modifications that had been installed during the time they were in the training program. Therefore, all the applicants were presented with this updated information about the SBLC squib valve power supply being separate from the 2A SBLC pump breaker.

The facility licensee recommended, based on the new information of updated modification on Unit 2, that the correct answer for RO question 79 be changed to reflect the modification. Therefore, the original answer choice "b" should be changed to the correct answer choice "d" on the master exam (the combined RO and SRO written examination questions as enclosed in this report) and "c" on the RO only examination (the as administered separate RO examination). [Note: the different answer choice is due to the licensee's examination development computer program that automatically and randomly mixes the four multiple choice selections every time an examination package is printed.]

NRC Resolution:

Based on the review of the licensee's revised lesson plan with respect to Quad Cities Modification information, Mods & LL 2002-02, pages 1 & 2, the licensee's justification and associated references clearly indicates the change in power supply to the 2A SBLC squib valve. Engineering design change EC 335593, "Reconfigure 2A SBLC Pump Motor Control Circuit," describes the design change to reconfigure the 120 VAC control circuit associated with the 2A SBLC pump motor. The control power for the relay, local start switch contact, and Squib valve circuit was now being fed from a different source other than the pump breaker. Therefore, the correct answer associated with the actions required by procedure QCOP 1100-02, Rev. 8, "Injection of Standby Liquid Control", would coincide with the licensee's recommended change. The licensee's recommendation was accepted. The answer to RO question 79 was updated to reflect the change. The correct answer is now "d" on the master exam, as enclosed in this report, and "c" for the applicant's as administered RO only examination.

Simulation Facility Report

Facility Licensee: Quad Cities Nuclear Power Station

Facility Docket No.: 50-254; 50-265

Operating Tests Administered: Weeks of December 2 and December 9, 2002

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
1-263-100A Narrow Range Reactor Water Level Meter (Yarway)	During normal operations, the narrow range reactor water level instrument would sporadically oscillate from + 30 to +48 inches. This oscillation caused annunciator 901-6, F-11, to actuate. The new digital feedwater (DFW) screen/system appeared not to indicate this level oscillation. Simulator work request # 3759.
1-263-100A Narrow Range Reactor Water Level Meter (Yarway)	During normal operations, the narrow range reactor water level instrument unexpectedly dropped low causing a half reactor scram signal. Simulator work request # 4298.
Rod Worth Minimizer	During normal and transient operations, the Rod Worth Minimizer kept alarming with a message noting, "Block echo signal mismatch." The alarm actuates for no apparent reason. Based on the simulator setup and condition, this alarm was not expected to actuate during normal operations. Simulator work request # 3483.

WRITTEN EXAMINATIONS AND ANSWER KEYS (RO/SRO)

RO/SRO Initial Examination ADAMS Accession # ML030350594