

August 18, 2006

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

SUBJECT: BYRON STATION, UNITS 1 AND 2  
NRC INITIAL LICENSE EXAMINATION REPORT 05000454/2006301(DRS);  
05000455/2006301(DRS)

Dear Mr. Crane:

On June 30, 2006, the NRC completed initial operator licensing examinations at your Byron Station. The enclosed report documents the results of the examination, which were discussed on June 30 and July 24, 2006, with Mr. D. Hoots and Mr. S. Stimac respectively, and with other members of your staff.

NRC examiners administered the operating test during the weeks of June 19 and 26, 2006. Members of the Byron Station Training Department staff administered the written examination on June 30, 2006. One Reactor Operator (RO) and five Senior Reactor Operator (SRO) applicants were administered license examinations. The results of the examinations were finalized on July 24, 2006. All six applicants passed all sections of their examinations resulting in the issuance of one operator and three senior operator licenses.

During the NRC's review of initial license applications, two senior operator applicants were granted eligibility deferments so that the applicants could take the examination. These two applicants will need to complete a minimum of 6 months onsite responsible power plant experience before they will receive a license. The applicants will be granted a license only after you certify in writing to the NRC that the applicants have completed the eligibility requirement that was previously deferred.

In accordance with 10 CFR Part 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).

C. Crane

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

Sincerely,

**/RA/**

Hironori Peterson, Chief  
Operations Branch  
Division of Reactor Safety

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

Enclosures:   1.   Operator Licensing Examination  
                              Report 05000454/2006301(DRS);  
                              05000455/2006301(DRS)  
                              w/Attachment: Supplemental Information  
                              2.   Simulation Facility Report  
                              3.   Post Examination Comments and  
                                      Resolutions  
                              4.   Written Examinations and Answer  
                                      Keys (RO & SRO)

cc w/encl 1 & 2:   Site Vice President - Byron Station  
                          Plant Manager - Byron Station  
                          Regulatory Assurance Manager - Byron Station  
                          Chief Operating Officer  
                          Senior Vice President - Nuclear Services  
                          Vice President - Mid-West Operations Support  
                          Vice President - Licensing and Regulatory Affairs  
                          Director Licensing  
                          Manager Licensing - Braidwood and Byron  
                          Senior Counsel, Nuclear  
                          Document Control Desk - Licensing  
                          Assistant Attorney General  
                          Illinois Emergency Management Agency  
                          State Liaison Officer, State of Illinois  
                          State Liaison Officer, State of Wisconsin  
                          Chairman, Illinois Commerce Commission  
                          B. Quigley, Byron Station

cc w/encl 1, 2, 3, & 4: S. Stimac, Training Manager, Byron Station

C. Crane

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Sincerely,

**/RA/**

Hironori Peterson, Chief  
Operations Branch  
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Chief Operating Officer  
Senior Vice President - Nuclear Services  
Vice President - Mid-West Operations Support  
Vice President - Licensing and Regulatory Affairs  
Director Licensing  
Manager Licensing - Braidwood and Byron  
Senior Counsel, Nuclear  
Document Control Desk - Licensing  
Assistant Attorney General  
Illinois Emergency Management Agency  
State Liaison Officer, State of Illinois  
State Liaison Officer, State of Wisconsin  
Chairman, Illinois Commerce Commission  
B. Quigley, Byron Station

cc w/encl 1, 2, 3, & 4: S. Stimac, Training Manager, Byron Station

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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: 05000454/2006301(DRS); 05000455/02006301(DRS)

Licensee: Exelon Generation Company, LLC

Facility: Byron Station, Units 1 and 2

Location: Byron, Illinois

Dates: June 21 through June 30, 2006

Examiners: M. Bielby, Senior Operations Engineer  
D. McNeil, Senior Operations Engineer  
B. Palagi, Senior Operations Engineer

Approved by: Hironori Peterson, Chief  
Operations Branch  
Division of Reactor Safety

## **SUMMARY OF FINDINGS**

ER 05000454/2006301(DRS), 05000455/2006301(DRS); 06/21/2006 - 06/30/2006;  
Exelon Generation Company, LLC, Byron Station. Initial License Examination Report.

The announced operator licensing initial examination was conducted by regional Nuclear Regulatory Commission examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9.

### Examination Summary:

- All six applicants passed their examinations, four of these applicants were issued respective operator or senior operator licenses. Two senior operator applicants were granted eligibility determinations so that the applicants could take the examination. These two applicants will need to complete a minimum of 6 months onsite responsible power plant experience before they will receive a license. (Section 4OA5.1)

## REPORT DETAILS

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

#### 4OA5 Other

##### .1 Initial Licensing Examinations

###### a. Examination Scope

Byron Station's training staff prepared the examination outline and developed the written examination and operating test. The Nuclear Regulatory Commission (NRC) examiners validated the proposed examination during the week of May 22, 2006, and conducted the operator licensing initial examination during the weeks of June 19 and 26, 2006. Byron Station training department staff members administered the written examination on June 30, 2006. In all cases, the training staff and the NRC examiners used the guidance established in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, to prepare, validate, revise, administer, and grade the examination. Five Senior Reactor Operator (SRO) and one Reactor Operator (RO) applicants were examined. Two of the five SRO applicants were granted eligibility deferments so they could take the examination.

###### b. Findings

###### Written Examination

The licensee developed the written examination. During their internal review, the NRC examiners determined that the examination, as submitted, was within the range of acceptability expected for a proposed examination. Written examination comments developed during review by the NRC staff, and as a result of examination validation were incorporated into the written examination in accordance with the guidance contained in NUREG-1021.

One post-examination comment was submitted by the applicants and station training department personnel on July 10, 2006. The results of the NRC's review of the comment is documented in Enclosure 3, Post Examination Comments and Resolutions.

###### 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 operating test. Operating test changes made during the validation of the operating test were agreed upon between the NRC and the licensee.

###### Examination Results

All six applicants passed their examinations, four of these applicants were issued respective operator or senior operator licenses. During the NRC's review of initial license applications, two senior operator applicants were granted eligibility deferments

so that the applicants could take the examination. These two applicants will need to complete a minimum of 6 months onsite responsible power plant experience before they will receive a license. The applicants will be granted a license only after the NRC receives written certification from the station that the applicants have completed the eligibility requirement that was previously deferred.

.2 Examination Security

a. Scope

The NRC examiners reviewed and observed the licensee's implementation of examination security requirements during the examination preparation and administration. The examiners used the guidelines provided in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," to determine acceptability of the licensee's examination security activities.

b. Findings

No findings were noted in this area. The licensee staff was observed to be enforcing correct examination security procedures.

4OA6 Meetings

.1 Exit Meeting

The chief examiner presented the examination team's preliminary observations and findings on June 30, 2005, to Mr. D. Hoots and other members of the Operations and Training Department staff. A subsequent exit via teleconference was held on July 24, 2006 with Mr. S. Stimac following review of the site post examination comments. The licensee acknowledged the observations and findings presented. No proprietary information was identified by the station's staff during the exit meeting.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## **KEY POINTS OF CONTACT**

### Licensee

D. Hoots, Site Vice President  
S. Stimac, Training Director  
L. Wehner, Operations Representative  
M. Jorgensen, Examination Author  
S. Deprest, Operation Training Program Specialist

### NRC

B. Bartlett, Senior Resident Inspector

## **ITEMS OPENED, CLOSED, AND DISCUSSED**

### Opened, Closed, and Discussed

None

## **LIST OF DOCUMENTS REVIEWED**

None

## **LIST OF ACRONYMS USED**

ADAMS	Agency-Wide Document Access and Management System
DRS	Division of Reactor Safety
NRC	Nuclear Regulatory Commission

## SIMULATION FACILITY REPORT

Facility Licensee:                      Byron Station

Facility Docket No:                      50-454; 50-455

Operating Tests Administered:              June 21 - 28, 2006

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
None	

## **POST EXAMINATION COMMENTS AND RESOLUTIONS**

Question Number 99.

Unit 1 control room has been evacuated and 1BOA PRI-5, Control Room Inaccessibility, has been implemented due to a fire in the Upper Cable Spreading Room.

The Remote Shutdown Panel (RSP) is being activated.

- The NSO has aligned the RSP and 1PL05JA per Attachment A of 1BOA PRI-5.
- The NSO reports he has NO indication of 1D SG level or pressure at the RSP.

What action(s) is/are directed for this report?

- A. If MSIVs are open, use any other SG for pressure, balance feedwater flow to be consistent with the other 3 SGs.
- B. If MSIVs are closed, stop feeding the 1D SG, stop the 1D RCP, and verify 1D SG PORV is closed.
- C. Dispatch an operator to the Unit 1 Fire Hazards Panel to establish communications with the NSO at the RSP and align 1D SG level and pressure indication.
- D. Verify 1D SG MSIV is closed, isolate AF Flow to 1D SG, initiate a cooldown to < 550°F with the other 3 SGs and verify 1D SG PORV remains closed.

### **Facility Comment:**

The question and the original correct answer "C" was based on the action required by procedure 1BOA PRI-5 CONTROL ROOM INACCESSIBILITY UNIT 1. 1BOA PRI-5 directs that if indications are not available at the Remote Shutdown Panel then an operator is to be dispatched to the Fire Hazards Panel to align needed indications. However, the Fire Hazards Panel only has level and pressure indication for Steam Generators 1A and 1B. Therefore, answer "C. Dispatch an operator to the Unit 1 Fire Hazards Panel to establish communications with the NSO at the RSP and align 1D SG level and pressure indication." is incorrect and there is no correct answer provided.

### **Facility Proposed Resolution:**

Because there was no correct answer provided the facility requested that question 99 be deleted from the examination.

NRC Resolution:

When question 99 was submitted to the NRC for pre-examination review, an excerpt from procedure 1BOA PRI-5 CONTROL ROOM INACCESSIBILITY UNIT 1 was supplied as supporting material for the correct answer. During the facility post examination review it was pointed out that the Fire Hazards Panel only has level and pressure indication for Steam Generators 1A and 1B. This makes answer "C" (Dispatch an operator to the Unit 1 Fire Hazards Panel to establish communications with the NSO at the RSP and align 1D SG level and pressure indication.) incorrect, and therefore no correct answer was provided. The Facility supplied the training lesson plan for the Remote Shutdown Panel (Module I1-RS-XL-01) as supporting evidence for this requested change. A review of training Module I1-RS-XL-01 confirmed that only Steam Generators 1A and 1B have level and pressure indications on the Fire Hazards Panel. Because there was no correct answer provided question 99 was deleted.

**WRITTEN EXAMINATIONS AND ANSWER KEYS (RO/SRO)**

RO/SRO Initial Examination ADAMS Accession # ML062260244.