



**UNITED STATES  
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REGION III  
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LISLE, IL 60532-4352

June 15, 2012

Mr. Jim Molden  
Site Vice President  
Prairie Island Nuclear Generating Plant  
Northern States Power Company, Minnesota  
1717 Wakonade Drive East  
Welch, MN 55089

**SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT; NRC INITIAL LICENSE EXAMINATION REPORT 05000282/2012301; 05000306/2012301**

Dear Mr. Molden:

On May 30, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Prairie Island Nuclear Generating Plant. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on May 22, 2012, with you and other members of your staff. An exit meeting was conducted by telephone on June 5, 2012, between Mr. T. Ouret, General Superintendent, Operations Training, Prairie Island Nuclear Generating Plant, and Mr. D. McNeil, Senior Operations Engineer, to review the proposed final grading of the written examination for the license applicants. During the telephone conversation, NRC resolutions of the station's post-examination comments, initially received by the NRC on May 30, 2012, were discussed.

The NRC examiners administered an initial license examination operating test during the weeks of May 14 and May 21, 2012. The written examination was administered by NRC examiners and Prairie Island Nuclear Generating Plant training department personnel on May 22, 2012. Five Senior Reactor Operator and seven Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on June 13, 2012. One applicant failed the written examination and was issued a proposed license denial letter. Eleven applicants passed all sections of their respective examinations. Five applicants were issued senior operator licenses and five were issued operator licenses. One applicant's operator license is being withheld pending resolution of a medical issue and the results of any possible written examination appeal.

In accordance with Title 10 of the Code of Federal Regulations (CFR) 2.390, 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 System

J. Molden

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Sincerely,

/RA/

Tamara E. Bloomer, Acting Chief  
Operations Branch  
Division of Reactor Safety

Docket Nos. 50-282; 50-306  
License Nos. DPR-42; DPR-60

Enclosures:

1. Operator Licensing Examination Report 05000282/2012301(DRS);  
05000306/2012301(DRS)  
w/Attachment: Supplemental Information
2. Simulation Facility Report
3. Written Examination and Answer Key (RO/SRO)
4. Written Examination Post-Examination Comments and Resolutions

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos. 50-282, 50-306  
License Nos. DPR-42, DPR-60

Report No: 05000282/2012301(DRS); 05000306/2012301(DRS)

Licensee: Northern States Power Company, Minnesota

Facility: Prairie Island Nuclear Generating Plant

Location: Welch, MN

Dates: May 14, 2012 – May 30, 2012

Inspectors: D. McNeil, Senior Operations Engineer  
M. Bielby, Senior Operations Engineer  
D. Reeser, Operations Engineer  
R. Baker, Operations Engineer  
D. Oliver, Operations Engineer

Approved by: T. Bloomer, Acting Chief  
Operations Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

ER 05000282/2012301(DRS); 05000306/2012301(DRS); 5/14/2012 - 5/30/2012;  
Northern States Power Company, Minnesota; Prairie Island Nuclear Generating Plant;  
Initial License Examination Report.

The announced initial operator licensing examination was conducted by regional U.S. Nuclear Regulatory Commission examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1.

### Examination Summary:

Eleven of twelve applicants passed all sections of their respective examinations. Five applicants were issued senior operator licenses and five applicants were issued operator licenses. One applicant failed the written examination and was issued a proposed license denial. One other applicant's license is being withheld and may be issued pending the outcome of any written examination appeal and a resolution of a medical condition. (Section 40A5.1).

## REPORT DETAILS

### 40A5 Other Activities

#### .1 Initial Licensing Examinations

##### a. Examination Scope

The U.S. Nuclear Regulatory Commission (NRC) examiners and members of the facility licensee's staff used the guidance prescribed in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9-Supplement 1, to develop, validate, administer, and grade the written examination and operating test. The NRC examiners prepared the outline and developed the written examination and operating test with the assistance of the Prairie Island Nuclear Generating Plant (PINGP) training staff. The NRC examiners validated the proposed examination during the week of April 16, 2012, with the assistance of members of the facility licensee's staff. During the on-site validation week, the examiners audited two license applications for accuracy. The NRC examiners, with the assistance of members of the facility licensee's staff, administered the operating test, consisting of job performance measures and dynamic simulator scenarios, during the period of May 14 through May 21, 2012. The facility licensee and the NRC examiners administered the written examination on May 22, 2012.

##### b. Findings

###### (1) Written Examination

During the validation of the written examination, several questions were modified or replaced. Changes made to the written examination were documented on Form ES-401-9, "Written Examination Review Worksheet," which is available electronically in the NRC Public Document Room or from the Agencywide Documents Access and Management System (ADAMS) under ADAMS Accession Number ML12165A137. On May 30, 2012, post-examination comments for the written examination were hand-delivered to the chief examiner at the Region III office. Three post-examination comments were provided for consideration by the NRC examiners when grading the written examination. The written examination post-examination comments and the NRC resolution for the post-examination comments are available in Enclosure 4 of this report. The administered written examination and answer key are available electronically in the NRC Public Document Room or in ADAMS under ADAMS Accession Number ML12165A126.

The NRC examiners graded the written examination on June 8, 2012, and conducted a review of each missed question to determine the accuracy and validity of the examination questions.

###### (2) Operating Test

During validation of the proposed operating test, several Job Performance Measures (JPMs) were modified or replaced, and some modifications were made to the dynamic simulator scenarios. Some JPMs were replaced because the simulator did not support the proposed JPM, or the JPM was too time-consuming to be used. Some changes were made to the proposed simulator scenarios, but most changes were cosmetic in nature, requiring more explanation or correcting typographical errors. Changes made to

the operating test, documented in a document titled, "Operating Test Comments," as well as the administered dynamic simulator scenarios and JPMs, are available electronically in ADAMS.

The NRC examiners completed operating test grading on June 8, 2012.

(3) Examination Results

Five applicants at the Senior Reactor Operator (SRO) level and seven applicants at the Reactor Operator (RO) level were administered written examinations and operating tests. Ten applicants passed all portions of their examinations and were issued their respective operating licenses. One RO applicant failed the written examination and was issued a proposed license denial. One other RO applicant passed all portions of the license examination, but received a written test grade below 83 percent. In accordance with NRC policy, the applicant's license will be withheld until any written examination appeal possibilities by other applicants have been resolved. If the applicant's grade is still equal to or greater than 80 percent after any appeal resolution, the applicant will be issued an operating license. If the applicant's grade has declined below 80 percent, the applicant will be issued a proposed license denial letter and offered the opportunity to appeal any questions the applicant feels were graded incorrectly. That applicant's license is also being withheld pending resolution of a medical issue.

.2 Examination Security

a. Scope

The NRC examiners reviewed and observed the licensee's implementation of examination security requirements during the examination validation and administration to assure compliance with 10 CFR 55.49, "Integrity of Examinations and Tests." 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 of significance were observed.

4OA6 Meetings

.1 Debrief

The chief examiner presented the examination team preliminary observations and findings on May 22, 2012, to Mr. J. Molden, Site Vice President, and other members of the PINGP Operations and Training Department staff. The examiners asked the licensee whether any of the material used to develop or administer the examination should be considered proprietary. No proprietary or sensitive information was identified during the examination or debrief/exit meetings.

.2 Exit Meeting

The chief examiner conducted an exit meeting on June 5, 2012, with T. Ouret, General Superintendent, Operations Training, by telephone. The NRC's final disposition of the station's post-examination comments were disclosed and discussed with Mr. Ouret during the telephone discussion.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

J. Molden, Site Vice President  
J. Anderson, Regulatory Affairs Manager  
T. Bacon, Assistant Operations Manager  
K. Davison, Director, Station Operations  
M. Fish, Supervisor, Operations Training  
J. Loesch, Supervisor, Continuing Training  
T. Ouret, General Superintendent, Operations Training  
M. Peterson, Fleet Superintendent, NRC Exams  
A. Pullam, Training Manager  
J. Ruttar, Operations Manager  
S. Sharp, Assistant Plant Manager  
J. Sorensen, Vice President Nuclear Operations Support  
J. Sternisha, General Manager – Nuclear Training

#### NRC

P. Zurawski, Resident Inspector  
D. McNeil, Senior Operations Engineer  
M. Bielby, Senior Operations Engineer  
D. Reeser, Operations Engineer  
R. Baker, Operations Engineer  
D. Oliver, Operations Engineer

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

#### Opened, Closed, and Discussed

None

### **LIST OF ACRONYMS USED**

ADAMS	Agencywide Document Access and Management System
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
ER	Examination Report
ES	Examiner Standards
JPM	Job Performance Measure
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
PINGP	Prairie Island Nuclear Generating Plant
RO	Reactor Operator
SRO	Senior Reactor Operator

## SIMULATION FACILITY REPORT

Facility Licensee: Prairie Island Nuclear Generating Plant  
Facility Docket Nos: 50-282; 50-306  
Operating Tests Administered: May 14 – May 21, 2012

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:

<b>ITEM</b>	<b>DESCRIPTION</b>
Makeup Totalizers	During administration of the examination, some crews were not able to add borated water to the reactor coolant system. Software engineers traced the problem to the totalizers in the CVCS.

**WRITTEN EXAMINATION AND ANSWER KEY (RO/SRO)**

The 2012 Prairie Island Nuclear Generating Plant Initial License Examination Administered  
Written Examination: ADAMS Accession No. ML12165A126.

## Written Examination Post-Examination Comments and Resolutions

### RO QUESTION No. 18

Given the following conditions:

- Both Units were operating at 100% power.
- 2RX transformer was taken out of service due to an oil leak.
- C20.3 AOP4, "Electrical Power System Operating Restrictions and Limitations Loss of 2RX Transformer," actions for removing 2RX from service are complete.
- Unit 1 trips.

Which of the following correctly shows the power supplies to the listed buses?

	<u>Bus 11</u>	<u>Bus 12</u>	<u>Bus 21</u>	<u>Bus 22</u>
a.	1RX	1RX	2M	2M
b.	de-energized	de-energized	2M	2M
c.	1RY	1RY	2RY	2RY
d.	de-energized	de-energized	1RX	1RX

### ANSWER

a.

The following student contention and facility contention are copied directly from the post-examination comment submission.

#### Applicant Contention:

Both answers "a" and "b" of question 18 could be correct, since they are both allowed line ups in C20.3AOP4 and 2C20.5. Both C20.3AOP4 and 2C20.5 require action be taken in accordance with Attachment 1 of each procedure to prevent overloading 1R transformer when it is supplying bus 21 and 22. Attachment 1 of both procedures allows disabling the M to R transfer. Attachment 1 of 2C20.5 (which is directed by C20.3AOP4) gives specific instructions about how to disable the M to R transfer. Not only is disabling the M to R transfer allowed, but this is how Prairie Island Nuclear Generating Plant (PINGP) implements the Attachment. On July 1, 2011, bus 11 was de-energized following a Unit 1 reactor trip since the M to R transfer had been disabled due to 1R transformer being lined up to supply Unit 2 buses. There is nothing in PINGP procedures that would allow distinguishing between answer "a" or "b" being correct, since both are allowed line ups.

#### Facility Contention:

Agree with student comment. Recommend accepting 'A' and 'B' as correct answers. Review of procedures determined that procedurally there is no preference in the line up of the 1RX transformer during the performance of this procedure. Stem of the question does not imply a line up or preference as to buses to remain powered.

## Written Examination Post-Examination Comments and Resolutions

### NRC Resolution:

The Region III examiners do not agree that both answers are correct answers. The Region III examiners have determined that an assumption must be made to make answer (b.) a correct answer. The applicant contends in his explanation that “both C20.3AOP4 and 2C20.5 require action be taken in accordance with Attachment 1 of each procedure to prevent overloading 1R transformer when it is supplying bus 21 and 22.” In 2C20.5, Section 4 (Limitations), Step 4.4, it states: “Both the bus ducts that connect the 1RX, 1RY, 2RX and 2RY transformer windings to the plant electrical system and the associated windings are rated at 3000 amps maximum current. In the case where any of these sources are out of service, we must cross tie from the opposite unit via the 4kV bus ties using the 12RXBT and 12RYBT tie breakers. The use of these cross ties can potentially cause the bus duct to exceed the maximum current rating. Follow guidance in Attachment 1 to this procedure to minimize any overloading.” Completion of C20.3 AOP4, as stated in this question, stem requires breaker 12RXBT be shut. However, the question stem states that the steps of C20.3AOP4 were completed, but does not specify that any portion of Attachment 1 was performed. With the completion of C20.3 AOP4, without executing any steps of Attachment 1, distractor (a.) is correct as written. In order for distractor ‘b.’ to be correct, an applicant would have to not only assume that Attachment 1 was executed, but must assume specific steps in Attachment 1 to block the M to R automatic transfer for the Unit 1 buses were completed.

Rule No. 7 for taking the written examination was read to the applicants immediately prior to beginning the written examination. Rule No. 7 states: “If you have any questions concerning the intent or the initial conditions of a question, do not hesitate to ask them before answering the question. Note that questions asked during the examination are taken into consideration during the grading process and when reviewing applicant appeals. Ask questions of the NRC examiner or the designated facility instructor *only*. A dictionary is available if you need it. When answering a question, do *not* make assumptions regarding conditions that are not specified in the question unless they occur as a consequence of other conditions that are stated in the question. For example, you should not assume that any alarm has activated unless the question so states or the alarm is expected to activate as a result of the conditions that are stated in the question. Similarly, you should assume that no operator actions have been taken, unless the stem of the question or the answer choices specifically state otherwise. Finally, answer all questions based on actual plant operation, procedures, and references. If you believe that the answer would be different based on simulator operation or training references, you should answer the question based on the *actual plant*.”

The applicant did not ask any questions concerning the use of Attachment 1 during administration of the examination. After completion of the steps in C20.3 AOP4, distractor (a.) is correct without assumption. Absent a statement in the stem of the question or in the distractors that Attachment 1 was executed and the M to R transfer was blocked, the applicant must answer the question based on the information provided, which leaves only distractor (a.) as a correct answer. The applicant referred to an occurrence when Attachment 1 was invoked by the plant. Again, during that occurrence, Attachment 1 was executed based on a decision by supervision. Supervision had to decide which steps in the Attachment were to be used, and if the M to R transfer was to be blocked. The decision to execute steps in Attachment 1 was not a requirement of the procedure (C20.3 AOP4). In accordance with Rule No. 7, read to the applicants immediately before administration of the written examination, an applicant must assume that no operator actions have been taken, unless the stem of the question or the answer choices specifically state otherwise. Therefore, distractor (b.) cannot be correct as it

## **Written Examination Post-Examination Comments and Resolutions**

requires an assumption be made that additional operator actions have been executed beyond that provided in the stem of the question.

In summary, the NRC believes the original question was a technically accurate question with only one correct answer. The examination answer key was not altered for this question. The only correct answer to Question No. 18 is distractor (a.).

## Written Examination Post-Examination Comments and Resolutions

### RO Question No. 54

Given the following conditions:

- There is a leak on Unit 2 Instrument Air to Containment.
- A Instrument Air Header Pressure dropped to 73 psig.
- B Instrument Air Header Pressure dropped to 74 psig.
  
- Unit 2 Instrument Air pressure continues to lower.
- Unit 1 Instrument Air pressure is rising.

A one-line diagram of the station air system was provided on the examination.

#### Which of the following could jeopardize the UNIT 1 instrument air supply?

- a. Opening MV-32321, 11/21 INSTR AIR HDR ISOL VLV
- b. Opening MV-32314, INSTR AIR HDR ISOL VLV A.
- c. Opening MV-32315, INSTR AIR HDR ISOL VLV B.
- d. Closing CP-40-7, STATION AIR RECEIVE X-CONN TO INSTRUMENT AIR.

#### ANSWER

a.

The following student contention and facility contention are directly copied from the post-examination comment submission.

#### Applicant Contention:

MV-32314 & MV-32315 close at 80No. in their respective air receivers (121 and 123), 121 and 122 Air compressors are normally running, with 123 in standby. Without knowing receiver pressures, it is reasonable to assume that 123 receiver lowered below 80No. before 121 receiver, closing MV-32315, isolating the leak and allowing 121 receiver pressure to recover before dropping below 80No. If this is the case, answer (c.) is also correct.

#### Facility Contention:

Disagree with student comment. Stem of the question clearly indicates a header pressure on both Instrument Air headers that would result in their associated isolation valves closing.

#### NRC Resolution:

The NRC agrees with the facility position that adequate information concerning air header, and, therefore, receiver pressures was provided in the stem of the question for an applicant to arrive at the correct answer without making any assumptions. Rule No. 7, read to the applicants immediately before beginning the written examination states, in part, that, "When answering a question, do *not* make assumptions regarding conditions that are not specified in the question unless they occur as a consequence of other conditions that are stated in the question." Without assumption, the only correct answer is (a.) See the following contention for final resolution for question No. 54.

## Written Examination Post-Examination Comments and Resolutions

### RO Question No. 54

See previous contention for the text of this question.

The following student contention and facility contention are directly copied from the post-examination comment submission.

#### **Applicant Contention:**

MV-32314 is and has been a valve open breaker motor valve for some time. Therefore, per the question, by MV-32315 opening would also be a correct answer. Recommend accepting 2 correct answers.

#### **Facility Contention:**

Agree with student comment. Recommend accepting 'A' and 'C' as correct answers. Multiple unique circumstances led to this recommendation:

- 1) MV-32314 has been Valve Open Breaker Open since August of 2010 (almost 2 years).
- 2) During the performance of the exam, the candidate submitting the feedback asked if their response to a question should be based on theory or "how the plant would actually react." The response given was to refer the candidate to the rules read at the beginning of the exam. Specifically the following passage:

"Finally, answer all questions based on actual plant operation, procedures, and references. If you believe that the answer would be different based on simulator operation or training references, you should answer the question based on the actual plant."

- 3) Interview with candidate indicates choice of Distractor 'C' was based on these considerations.

With these extenuating circumstances, Prairie Island Nuclear Generating Plant believes it is appropriate to accept 'A' and 'C' as correct answers in this instance.

#### **NRC Resolution:**

The NRC agrees with the applicant and the facility that distractor (c.) is a second correct answer. In light of the new information provided by the applicant and the facility, the opening of MV-32315 would put the Unit 1 air system at risk as it would re-connect Unit 1's air system with the postulated leak on Unit 2. This information was not provided to the exam author during formulation of the question and was not detected by the facility validators during their review of the question.

In summary, the examination answer key was modified as a result of this post examination comment with accompanying new information. Question No. 54 was assigned two correct answers (a. and c.) on the answer key.

J. Molden

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Sincerely,

/RA/

Tamara E. Bloomer, Acting Chief  
Operations Branch  
Division of Reactor Safety

Docket Nos. 50-282; 50-306  
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Enclosures:

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Letter to Mr. Jim Molden from Ms. Tamara E. Bloomer dated June 15, 2012.

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT; NRC INITIAL LICENSE  
EXAMINATION REPORT 05000282/2012301; 05000306/2012301

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