



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

August 1, 2016

Mr. Scott Northard  
Acting 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, UNITS 1 AND 2 –  
BASELINE EMERGENCY PREPAREDNESS BIENNIAL EXERCISE INSPECTION  
REPORT 05000282/2016502; 05000306/2016502

Dear Mr. Northard:

On July 1, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed a Baseline Emergency Preparedness Biennial Exercise inspection at your Prairie Island Nuclear Generating Plant, Units 1 and 2. The enclosed report documents the inspection results, which were discussed on June 30, 2016, with you and other members of your staff.

This inspection 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.

Based on the results of this inspection, no NRC-identified and no self-revealed findings of very low safety significance were identified.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection

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Sincerely,

*/RA/*

Steven K. Orth, Chief  
Plant Support Branch  
Division of Reactor Safety

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

Enclosure:  
IR 05000282/2016502; 05000306/2016502

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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: 05000282/2016502; 05000306/2016502

Licensee: Northern States Power Company, Minnesota

Facility: Prairie Island Nuclear Generating Plant, Units 1 and 2

Location: Welch, MN

Dates: June 27 through July 1, 2016

Inspectors: Gregory Hansen, Sr. Emergency Preparedness Inspector  
Michelle Garza, Emergency Preparedness Inspector  
Eugene Bonano, Health Physicist  
Charles Zoia, Operations Engineer

Approved by: Steven K. Orth, Chief  
Plant Support Branch  
Division of Reactor Safety

Enclosure

## **SUMMARY**

IR 05000282/2016502, 05000306/2016502; June 27, 2016 through July 1, 2016; Prairie Island Nuclear Generating Plant, Units 1 and 2; Baseline Emergency Preparedness Biennial Exercise Inspection; Exercise Evaluation Scenario Review; Performance Indicator Verification.

This report covers a 1-week period of announced baseline inspection by four regional inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after U.S. Nuclear Regulatory Commission (NRC) management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5, dated February 2014.

### **NRC-Identified and Self-Revealed Findings**

#### **Cornerstone: Emergency Preparedness**

No findings were identified.

### **Licensee-Identified Violations**

No violations were identified.

## **REPORT DETAILS**

### **1. REACTOR SAFETY**

#### **Cornerstone: Emergency Preparedness**

#### 1EP1 Exercise Evaluation (71114.01)

##### .1 Exercise Evaluation

##### a. Inspection Scope

The inspectors reviewed the June 28, 2016, biennial emergency preparedness exercise's objectives and scenario to ensure that the exercise would acceptably test major elements of the licensee's emergency plan and to verify that the exercise's simulated problems provided an acceptable framework to support demonstration of the licensee's capability to implement its plan. The inspectors also reviewed records of other drills and exercises conducted in 2014 and 2016, to verify that those drills' scenarios were sufficiently different from the scenario used in the June 28, 2016, exercise.

The inspectors evaluated the licensee's exercise performance, focusing on the risk-significant activities of emergency classification, notification, and protective action decision making, implementation of accident mitigation strategies, and correction of past exercise weaknesses in the following emergency response facilities:

- Control Room Simulator (CRS);
- Technical Support Center (TSC);
- Operations Support Center (OSC); and
- Emergency Operations Facility (EOF).

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interfaces with offsite officials, readiness of emergency facilities and related equipment, and overall implementation of the licensee's emergency plan.

The inspectors attended post-exercise critiques in the CRS, TSC, OSC, and EOF to evaluate the licensee's initial self-assessment of its exercise performance. The inspectors later met with the licensee's lead exercise evaluators and managers to obtain the licensee's findings and assessments of its exercise participants' performances. These self-assessments were then compared with the inspectors' independent observations and assessments to assess the licensee's ability to adequately critique its exercise performance. Documents reviewed are listed in the Attachment to this report.

This exercise evaluation inspection constituted one sample as defined in Inspection Procedure (IP) 71114.01-06.

##### b. Findings

No findings were identified.

1EP8 Exercise Evaluation – Scenario Review (71114.08)

a. Inspection Scope

Prior to the inspection activity on-site, the inspectors conducted an in-office review of the exercise objectives and scenarios submitted to the U.S. Nuclear Regulatory Commission (NRC) using IP 71114.08, "Exercise Evaluation - Scenario Review," to determine if the exercise would test major elements of the Emergency Plan as required by Title 10 of the *Code of Federal Regulations* 50.47(b)(14). Documents reviewed are listed in the Attachment to this report.

This review of the exercise objectives and scenario constituted one inspection sample as defined in IP 71114.08.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES**

**Cornerstone: Emergency Preparedness**

4OA1 Performance Indicator (PI) Verification (71151)

.1 Drill/Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise Performance PI for the period from the second quarter 2015 through first quarter 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the performance indicator to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; assessments of PI opportunities during pre-designated control room simulator training sessions, and performance during other drills. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one drill/exercise performance sample as defined in IP 71151-05.

b. Findings

No findings were identified.

## .2 Emergency Response Organization Drill Participation

### a. Inspection Scope

The inspectors sampled licensee submittals for the Emergency Response Organization (ERO) Drill Participation PI for the period from the second quarter 2015 through first quarter 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; performance during the 2014 and 2015 exercises and drills; and revisions of the roster of personnel assigned to key emergency response organization positions. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one ERO drill participation sample as defined in IP 71151-05.

### b. Findings

No findings were identified.

## .3 Alert and Notification System

### a. Inspection Scope

The inspectors sampled licensee submittals for the Alert and Notification System (ANS) PI for the period from the second quarter 2015 through first quarter 2016. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI and results of periodic scheduled ANS operability tests. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one ANS sample as defined in IP 71151-05.

### b. Findings

No findings were identified.

#### 4OA6 Management Meetings

##### .1 Exit Meeting Summary

On June 30, 2016, the inspectors presented the biennial exercise inspection results to you and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

S. Northard, Acting Site Vice President  
T. Conboy, Director of Site Operations  
S. Sharp, Director of Performance Improvement  
R. White, Director of Security/EP  
A. Khanifar, Vice President and Fuel Management  
B. Carberry, EP Manager  
L. Anderson, EP Manager – Monticello  
A. Kennedy, EP Coordinator  
G. Medina, EP Training  
G. Johnson, System Engineer Manager  
J. Angel, Mechanical General Supervisor  
C. Mundt, I&C General Supervisor  
D. Shields, Chemistry General Supervisor  
S. Seilhmyer, Operations Support Manager  
P. Brunsgaard, Manager Engineering Programs  
T. Vander Warf, Corporate Training Supervisor  
J. Callahan, Fleet EP Manager  
K. Hernandez, NOS Supervisor  
H. Butterworth, Director of Business Support  
J. Kivi, Regulatory Affairs Manager  
J. Ellis, EP Intern  
R. Sitek, Emergency Coordinator  
G. Holthaus, Fleet EP Coordinator  
P. Johnson, Regulatory Analyst  
R. Jacobson, NOS Auditor  
J. Grubb, General Manager of Fleet Operations

#### U.S. Nuclear Regulatory Commission

L. Haeg, Senior Resident Inspector  
P. LaFlamme, Resident Inspector

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

#### Opened, Closed and Discussed

None

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the 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 on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

### 1EP1 Exercise Evaluation (71114.01)

- Prairie Island Nuclear Generating Plant Emergency Plan; Revision 52
- F2; Radiation Safety; Revision 38
- F3-1; Onsite Emergency Organization; Revision 26
- F3-2; Classification of Emergencies; Revision 46
- F3-4; Responsibilities during an Alert, Site Area Emergency, or General Emergency; Revision 41
- F3-5; Emergency Notifications; Revision 32
- F3-8; Recommendations for Offsite Protective Actions; Revision 39
- FP-OP-COO-01; Conduct of Operations; Revision 18
- C47012-0108; Alarm Response Procedure – PZR LO PRESS ALERT; Revision 44
- C20.3 AOP2; Electric Power System Operating Restrictions Loss of 1R Transformer; Revision 13
- C16; Spent Fuel Cooling System; Revision 59
- 1C4 AOP2; Steam Generator Tube Leak; Revision 24
- F3; Emergency Evacuation; Revision 27
- Drill Critique Reports; August 2015 – May 2016
- AR 01477739; EP Drill, May 5, 2015 - Notification completion took 16 minutes; Dated October 30, 2015
- AR 01478095; TSC Min Manning contains two on-shift positions; Dated November 2, 2015
- AR 01480059; February 17, 2015, February 24, 2015, & March 3, 2015, ERO Table Top Critique; Dated August 5, 2015
- AR 01480726; May 26, 2015, ERO Drill Table Top Conduct of Drill; July 29, 2015
- AR 01483849; EP Drill, June 23, 2015, - EOF Ventilation; Dated July 9, 2015
- AR 01483883; EP Drill, June 23, 2015, - Difference in PAR call; Dated November 11, 2015
- AR 01483982; EP Drill, June 23, 2015, - Notification completion took 21 minutes; Dated November 9, 2015
- AR 01512461; Potential shortage of quals for OSC maint. supv; February 2016 drill; Dated February 24, 2016
- AR 01512482; EP Drill, February 16, 2016, - Notification completion time took 17 min; Dated April 29, 2016
- AR 01512649; PINGP EP Drill, February 16, 2016, trend w/ one ORO notification; Dated June 22, 2016
- AR 01512846; February 16, 2016, EP Drill Initial PAR was incorrect; Dated May 28, 2016
- AR 01518589; April 2016 ERO Drill - Accountability list; Dated April 23, 2016
- AR 01518615; April 12th 2016, EP Drill - Offsite Notification time missed; Dated June 10, 2016
- AR 01518619; April 12th 2016, EP Drill - PAR Change confusion; Dated June 8, 2016
- AR 01518808; EP Drill - Failed objective for incorrect PAR; Dated June 22, 2016
- AR 01522258; May 2016 Drill - Adequacy of EOF Verbal Communication; Dated June 27, 2016

- AR 01522267; May 2016 Drill - Weakness in Emerg Declaration Time; Dated June 27, 2016
- AR 01522269; EOF normal filter d/p questionable indication; Dated June 27, 2016
- AR 01522271; May 17, 2016, ERO Drill - Exemption List Too Large; Dated June 27, 2016
- AR 01522275; May 2016 ERP Drill - Uncertainty re: Rad Meter Stickers; Dated June 27, 2016
- AR 01522280; Expectation for dosimetry during EP drill May 17, 2016; Dated June 27, 2016
- AR 01522286; Cell phones not turned off entering Control Room; Dated June 27, 2016
- AR 01522321; PINGP 1156 Field Team Communicator Checklist needs revision;  
Dated June 27, 2016
- AR 01522417; Notification completion time for NUE took 16 minutes; Dated June 27, 2016
- AR 01522735; EP Drill- FSA Observation related to Notification Form 577;  
Dated June 27, 2016
- AR 01522739; EP Drill- FSA Observation related to PAR development; Dated June 27, 2016
- AR 01522740; EP Drill- FSA Observations of Adequacy of Worker Protection;  
Dated June 27, 2016
- AR 01522741; EP Drill- FSA Observation related to Mitigating Actions; Dated June 27, 2016

#### 1EP8 Exercise Evaluation – Scenario Review (71114.08)

- Prairie Island Nuclear Generating Plant 2016 Biennial Exercise 60-Day Submittal; April 2016

#### 4OA1 Performance Indicator Verification

- NRC PI Data Sheets; NRC Indicator ANS Reliability; April 2015 – March 2016
- NRC PI Data Sheets; ERO Readiness; April 2015 – March 2016
- NRC PI Data Sheets; Drill/Exercise Performance; April 2015 – March 2016

## **LIST OF ACRONYMS USED**

ADAMS	Agencywide Documents Access and Management System
ANS	Alert and Notification System
AR	Action Request
CRS	Control Room Simulator
EOF	Emergency Operations Facility
ERO	Emergency Response Organization
IP	Inspection Procedure
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
OSC	Operations Support Center
PARS	Publicly Available Records System
PI	Performance Indicator
SDP	Significance Determination Process
TSC	Technical Support Center

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in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management 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/

Steven K. Orth, Chief  
Plant Support Branch  
Division of Reactor Safety

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