

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-282/85004  
50-306/85004  
50-263/85013

Docket No. 50-282  
50-306  
50-263

License Nos. DPR-42  
DPR-60  
DPR-22

Licensee: Northern States Power Company  
414 Nicollet Mall  
Minneapolis, MN 55401

Facility Names: Prairie Island Nuclear Generating Plants, Units 1 and 2;  
Monticello Nuclear Generating Plant

Inspection At: Red Wing, MN and Minneapolis, MN

Inspection Conducted: Red Wing, MN on February 25-28 and March 11-15, 1985;  
Minneapolis, MN on March 26-29, 1985

Inspector: *F. J. Smeenge*  
R. J. Smeenge

*4/17/85*  
Date

Approved By: *F. C. Hawkins*  
F. C. Hawkins, Chief  
Quality Assurance Programs Section

*4/17/85*  
Date

Inspection Summary

Inspection of February 25-28, March 11-15 and 26-29, 1985 (Report  
Nos. 50-282/85004; 50-306/85004 and 50-263/85013(DRS))

Areas Inspected: Special, announced augmented inspection of surveillance testing and calibration activities and the corporate QA audit program. The inspection involved a total of 59 inspection-hours at the Prairie Island Nuclear Generating Plant and 20 inspection-hours at the Northern States Power Company Corporate Headquarters by one regional inspector.

Results: No violations were identified.

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## DETAILS

### 1. Persons Contacted

#### Prairie Island Nuclear Generating Plant

\*E. L. Watzl, Plant Manager  
\*B. F. Stephens, Lead Senior Production Engineer  
\*K. Beadell, Superintendent Quality Engineering  
J. Bierbrower, Surveillance Testing Coordinator

#### Northern States Power Company, Corporate Headquarters

\*K. J. Albrecht, Director, Power Supply QA  
P. H. Kamman, Superintendent, Nuclear Operations QA  
D. W. Krech, QA Supervisor  
G. T. Bart, QA Supervisor

#### U. S. NRC

\*J. E. Hard, Senior Resident Inspector  
\*P. L. Hartmann, Resident Inspector  
\*F. Hawkins, Chief, Quality Assurance Programs Section

Other personnel were contacted as a matter of routine during the inspection.

\*Indicated those attending the exit meeting on March 29, 1985 at the Prairie Island Nuclear Generating Plant.

### 2. Inspection Details

#### a. Surveillance Testing and Calibration

The inspector observed technicians performing surveillance testing and calibration in accordance with nine procedures and reviewed data sheets for surveillance testing and calibration performed in accordance with 15 procedures. During the week of February 25-28, Unit 1 was completing the 10 year outage inspection and preparing for heatup. Heatup was in process during the week of March 11-15. Unit 2 was operating at or near full capacity throughout this inspection.

#### (1) Surveillance Tests and Calibrations Observed

(a) SCP122A, "Event Monitoring Instrument Calibration,"  
Revision 1, (RCST temperature and hot  
and cold loop calibration only)

(b) STP1009, "Nuclear Intermediate Functional Test,"  
Revision 8

- (c) STP1011, "Nuclear Source Range Functional Test,"  
Revision 6, with changes
  - (d) STP1022, "Boric Acid Tank Level Analog Test,"  
Revision 6, Tanks 11, 121, and 21
  - (e) STP1220, "Check of Auxiliary Feedwater Flow Indication  
to Steam Generator," Revision 2
  - (f) STP1226A, "Containment H<sub>2</sub> Monitor Monthly Test,"  
Revision 0
  - (g) STP2220, "Check of Auxiliary Feedwater Flow Indication  
to Steam Generator," Revision 2
  - (h) STP2226B, "Containment H<sub>2</sub> Monitor Monthly Test,"  
Revision 0
  - (i) SP2003, "Analog Protection Functional Test," Revision 6
- (2) Surveillance Tests and Calibration Data Sheets Reviewed
- (a) SP1083, "Response to the Safeguards Signal Test,"  
Revision 11 (Technical Specification  
(T.S.) 4.8.A8, 4.5.A1a, 4.5.A2a, 4.5.A3,  
4.5.A4a, and 4.5.A5a)
  - (b) SP1091, "Monthly Containment Fan Coil Unit Surveillance,"  
(T.S. 4.5.B2)
  - (c) SP1092A, "Safety Injection Check Valve Test (Reactor  
Vessel Head Off)," Revision 5 (T.S. 4.5.B3b  
and 4.5.B3g3)
  - (d) SP1099, "Main Steam Isolation Valve Closure Test,"  
Revision 4 (T.S. 4.7)
  - (e) SP1113, "Annual Steam Exclusion Damper Inspection,"  
Revision 2 Units 1 & 2 (T.S. 4.8c)
  - (f) SP1133, "BAT LO Level Actuation of RWST Valve,"  
Revision 4 (T.S. 4.5.B3f)
  - (g) SP1137, "Recirculation Mode Valve Functional Test,  
Unit 1," Revision 7 (T.S. 4.5.B3f)
  - (h) SP1144, "Safety Injection Relay SI-24X Contact  
Verification," Revision 2 (T.S. A.5.A1b)

- (i) SP1145, "Safety Injection Relay SI-11X Contact Verification," Revision 3 (T.S. 4.5.A1b)
- (j) SP1146, "Safety Injection Relay SI-14X Contact Verification," Revision 2 (T.S. 4.5.A1b)
- (k) SP1147, "Safety Injection Relay SI-21X Contact Verification," Revision 3 (T.S. 4.5.A1b)
- (l) SP1236, "Cycling SI Section XI MV's," Revision 0 (T.S. 4.5.B3f)
- (m) SP2091, "Monthly Containment Fan Coil Unit Surveillance," (T.S. 4.5.B2)
- (n) STP1035B, "Reactor Protection Logic Test 'Hot Shutdown'," Revision 9 (T.S. 4.8.A8)
- (o) PM3002-2, "Diesel Cooling Water Pump Annual Inspection," Unit 1 and 2 (T.S. 4.5.A5b)

(3) Results of Inspection

The surveillance tests and calibrations observed were randomly selected from work scheduled for the Instrument and Control (I&C) group. The inspector observed the technicians as they prepared for the work, removed the system from service, performed the work, recorded data, obtained independent verification when applicable, prepared work requests for corrective action when criteria were not met or a problem was identified, returned the system to service, and turned in the data sheets for review.

The technicians were interviewed as they performed their work and were found to have a good technical background from the standpoint of both experience and education. All the technicians were familiar with the systems they were working on and any interfacing systems which could be affected by the work they were performing. Auxiliary test equipment used by the technicians was in current calibration. Procedures were followed. The technicians removed and returned systems to service as required by the procedures.

During the week of February 25-28, all surveillance testing and calibration activities centered around Unit 1, which was in preparation for heatup. While observing the removal and return of Unit 1 systems to service, it appeared that the shift supervisors and reactor operators were casual in their approvals to remove a system from service. For example, the technician informed the shift supervisor of the procedures he would be working to, and he was allowed to proceed. The reactor operator would then make an entry, recording the work

to be performed, in the Unit 1 log. During this week, the inspector observed no shift supervisor or reactor operator who looked beyond the cover of the procedure. One specific problem was noted on February 28: while observing the hot and cold loop calibration in accordance with SCP1224, work was discontinued when the simulated loop temperature readings were to be taken from the control board recorder. The CCTV monitor, located above the recorder, indicated that the loop temperature was over 500°. The temperature was being simulated by other I & C technicians who were performing work to a different calibration procedure in the same loop. This interference might have been prevented if there had been more attention to the details of the procedures by either the shift supervisor, reactor operators or the surveillance coordinator. Prior to exiting the plant on February 28, the inspector identified, to Mr. E. Watzl, his concern that there appeared to be a lack of attention in this area.

In the interval between February 28 and March 11, the heatup of Unit 1 had begun. With Unit 1 heating up and Unit 2 at rated power, the inspector observed a significant difference in the granting of approval to remove systems from service for surveillance testing and calibration. Unlike the examples noted previously, the shift supervisors and reactor operators both reviewed the procedures prior to granting their approval and logging the systems out of service.

The inspector reviewed the data recorded for 15 surveillance tests identified in Section 4 of the Technical Specifications. Unit 1 tests selected were those tests required during each reactor refueling shutdown or prior to full power heatup. Other tests for both Units 1 and 2 were selected because specific time between tests were identified in the Technical Specifications. The Unit 1 tests required during shutdown had all been performed, data sheets were complete and there was evidence that all data had been reviewed and approved as required. Test records provided evidence that those tests required at specific intervals had been performed when required during the last 18 month period. Samples selected from this group were found to have complete data sheets and the required reviews and approvals. In the sample data reviewed, if corrective action was required because acceptance criteria was not met, there was evidence that corrective action had been initiated.

No violations were identified in this area.

b. Audit Program

The Northern States Power Company audit program was reviewed to verify compliance with regulatory requirements and QA program commitments.

(1) Documents Reviewed

- (a) 1AWI 2.2.1, "Nuclear Operations Quality Assurance Findings," Revision 1
- (b) 3AQP 1.7, "Monthly Planning Meeting," Revision 1
- (c) 3AQP 2.1, "Standard Audit Procedures," Revision 5
- (d) 3AQP 2.2, "Audit Plan," Revision 4
- (e) 3AQP 2.3, "Audit Checklist," Revision 4
- (f) 3AQP 2.4, "Audit Report," Revision 4
- (g) 3AQP 2.5, "Audit Schedule and Log," Revision 3
- (h) 3AQP 2.6, "Audit Conferences," Revision 0
- (i) 3AQP 2.7, "Functional Area Evaluation," Revision 1
- (j) 1ACD 2.2, "Audits," Revision 4
- (k) N1ACD 9.1, "Audits," Revision 0
- (l) N1ACD 3.3, "Auditor Certification," Revision 0
- (m) N1ACD 4.6, "Safety Audit Committee," Revision 0
- (n) "Audit Tracking Index"
- (o) "Open Finding Index"
- (p) "Quality Auditors Handbook" (prepared by Cygna Energy Services, Boston, Mass.)

(2) Audits Reviewed

- (a) AG 83-1-19, ASME Section XI, Pump and Valve Surveillance, Part A, Monticello, and Part B, Prairie Island
- (b) AG 84-3, Monticello Equipment Control
- (c) AG 84-7-6, Annual 10 CFR 50.54(t) Emergency Preparedness Review
- (d) AG 84-32-7, Prairie Island (Independent Fire Protection Inspection)
- (e) AG 84-38-2, Plant Audit by Prairie Island and Monticello
- (f) AG 84-45-18, Welder Training, Testing and Certification

(3) Results of Inspection

The audit program administered by Northern States Power Company Corporate Nuclear Operations QA Group is structured to fulfill NRC audit program commitments. Both the Monticello and Prairie Island plants do have an internal audit program established; however, these plant audit programs are only implemented by the plant managers for selected plant activities which he feels merits special audit attention. The inspector reviewed only the audit activities of the Nuclear Operations QA Group during this inspection.

During the review of the procedures which implement the audit program, the following observations were made:

- (a) The licensee is in the process of replacing older Administrative Control Directives (ACDs) with Nuclear Administrative Control Directives (NACDs).
- (b) Procedure 1ACD 2.2 required the Safety Audit Committee (SAC) to review the audit system at least once per six months as required by Paragraph 6.c of the Technical Specifications. The new procedures, N1ACD 9.1 and 4.6, do not identify this requirement. SAC meeting minutes provided evidence that the Technical Specifications requirement of Paragraph 6.c has been met during the last year. The minutes also recorded that audit reports are being reviewed by SAC. Licensee representatives indicated that the new procedures will be revised to reflect the requirement of Paragraph 6.c. Pending appropriate procedure revision, this matter is considered open (50-263/85004-01; 50-306/85004-01; 50-263/85013-01).
- (c) Paragraph 4.5 of ANSI N18.7 requires that auditors are to be independent of the area audited. This independence for auditors is not addressed in any of the licensee's procedures. The procedures identify that technical specialists and management representatives may be used as auditors. In the audit records reviewed, only one audit used an auditor that was not a member of the QA group, which has the required independence. Based on review of the audit, it was evident that the auditor was not auditing in an area where he had responsibilities. Licensee representatives interviewed were aware of this requirement and stated that their procedures would be revised to include a review of prospective auditors to determine their independence from the area to be audited. Pending appropriate procedure revision, this matter is considered an open item (50-282/85004-02; 50-306/85004-02; 50-263/85013-02).

- (d) During the inspection of surveillance testing and calibration at Prairie Island, the inspector asked to see the records for the last audit for these areas. An audit had been scheduled for the third quarter of 1984. This audit had been started, but not finished. A review of the minutes for the QA monthly planning meetings for the past six months indicated that the licensee recognized that this audit was not completed on schedule and that it has now been rescheduled for the second quarter of 1985.
- (e) Paragraph 6.a of the Technical Specifications requires that all safety-related activities are to be audited within a period of two years. Although there were no records at the site to show that this had been accomplished, records at the Corporate Headquarters indicated that the last audit of surveillance testing and calibration at Prairie Island was conducted during the fourth quarter of 1983 (less than two years).
- (f) Procedure 3AQP 2.5 has recently implemented a computerized QA Audit Tracking Index which identifies when the last audit was conducted and when the next audit is due for 236 audit point subjects. Included in these audit points are specific Technical Specifications requirements. The Audit Tracking Index identifies audit due dates to the end of 1986.

Certification records for six lead auditors were also reviewed. Audit schedules for the last year indicated that all six had maintained their proficiency by participation in the audit process.

The inspector reviewed the Open Finding Index. Only one of the 35 open findings identified for the two sites had not been responded to within the required 30 days. This response was less than two weeks overdue and had been received in the previous days mail and was in the process of being reviewed and logged into the index. The index identified several findings where an unacceptable response had been received and the response had been forwarded to upper management for resolution. Timely responses to audit findings and management's resolution of unacceptable responses are both positive signs of licensee management attention and involvement in the audit program.

Audit record packages for six audits were examined. These packages were all found to be complete and provided evidence that a comprehensive audit program is being implemented by the licensee.

No violations were identified in this area.



3. Conclusions

a. Surveillance Testing and Calibration

The inspector concluded that, except for the lack of attention to detail identified during the removal of systems from service prior to Unit 1 heatup, adequate surveillance testing and calibration programs have been established and implemented at Prairie Island. Although the instance noted in this report is of relatively minor significance, increased management and craft personnel attention is warranted to assure that similar situations of greater significance do not occur.

b. Audits

The audit program administered by Northern States Power Company Nuclear Operations QA group for both Prairie Island and Monticello fulfills the audit program requirements in the areas which were reviewed during this inspection.

4. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Section 2.b(3)(b) and Section 2.b(3)(c).

5. Exit Interview

The inspector met with licensee representatives (denoted under Persons Contacted) on March 29, 1985, and summarized the purpose, scope, and findings of the inspection. The inspector discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary.