

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No: 50-282/81-04; 50-306/81-04

Docket No: 50-282; 50-306

License No: DPR-42; DPR-60

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

Facility Name: Prairie Island Nuclear Generating Plant

Inspection At: Prairie Island Site, Red Wing, MN 55066

Inspection Conducted: February 1-28, 1981

Inspectors:

*C. D. Feierabend*  
C. D. Feierabend

3/13/81

*B. L. Burgess*  
B. L. Burgess

3/13/81

Approved By:

*W. S. Little*  
W. S. Little, Chief  
Reactor Projects Section 2C

3/16/81

Inspection Summary

Inspection on February 1-28, 1981 (Report No. 50-282/81-04; 50-306/81-04)

Areas Inspected: Routine resident inspection of plant operation, maintenance, surveillance, security, radiation protection, and followup on IE Bulletins.

The inspection involved a total of 176 inspector hours onsite by two NRC inspectors including 41 inspector hours onsite during off-shifts.

Results: No items of noncompliance were identified.

## DETAILS

### 1. Personnel Contacted

F. Tierney, Plant Manager  
J. Brokaw, Plant Superintendent, Operations and Maintenance  
E. Watzl, Plant Superintendent, Plant Engineering and Radiation Protection  
A. Hunstad, Staff Engineer  
R. Lindsey, Superintendent, Operations  
J. Nelson, Superintendent, Maintenance  
J. Hoffman, Superintendent, Technical Engineering  
D. Mendele, Superintendent, Operations Engineer  
D. Schuelke, Superintendent, Radiation Protection  
A. Smith, Senior Scheduling Engineer  
M. Klee, Superintendent, Nuclear Engineering  
K. Albrecht, Senior Quality Assurance Engineer  
D. Haugland, Engineer  
G. Lenertz, Engineer  
K. Beadell, Engineer  
D. Stember, Engineer  
G. Miller, Engineer  
D. Hansen, Inservice Inspection Engineer  
C. Harmsen, Supervising Engineer  
K. Kehren, Assistant Construction Superintendent  
D. Cragoe, Shift Supervisor  
G. Edon, Shift Supervisor  
P. Ryan, Shift Supervisor  
M. Balk, Shift Supervisor  
T. Goetsch, Shift Supervisor  
D. Walker, Shift Supervisor  
P. Valtakis, Shift Supervisor

### 2. Operational Safety Verification

#### a. General

Unit 1 operated routinely throughout the month. Unit 2 was shut down on February 21 for scheduled refueling and maintenance.

#### b. Control Room Observations

The inspector observed control room operations, reviewed applicable logs, conducted discussions with control room operators and observed shift turnovers. The inspector verified the operability of selected emergency systems, reviewed equipment control records, and verified proper return to service of affected components.

#### c. Tours

Tours of the auxiliary, turbine and containment buildings, and external areas were conducted to observe plant equipment conditions, including potential fire hazards, and to verify that maintenance requests had been initiated for equipment in need of maintenance.

By observation and direct interview, the inspector verified that security procedures were being implemented in accordance with the plant security plan.

The inspectors observed plant housekeeping/cleanliness conditions, and verified implementation of radiation protection controls.

During one of the tours the inspector observed a contractor improperly entering a posted area without protective shoe covers. The licensee HP technician took immediate corrective action to assure that no activity was spread from the area. The technician completed surveys of the individual, supervised proper exit from the area and made an appropriate report to his supervisor.

During a tour of containment, the inspector observed licensee personnel respond to an injury of a contractor employee who had hit his head on a beam and was unconscious for a short period of time. Licensee HP technicians and onsite nurse gave first aid and accompanied him in an ambulance to the hospital for examination. The inspectors observed that the event was handled professionally, demonstrating ability to respond to an emergency.

d. Independent Verification

The inspectors performed walk downs of the accessible portions of the cooling water system. This included confirmation of selected portions of the licensee's procedures, checklists, and plant drawings, inspection of conditions of components and piping supports, inspection of breakers and cabinets, verification of selected instruments for proper valving, equipment control locks or tags and comparison of remote and local indication.

3. Maintenance

a. Review of Work Request (WR's) and Work Request Authorization (WRA's)

The inspector selected and reviewed several WR's and WRA's to determine the status of safety related systems, to verify that proper priorities were given and to verify that design changes were initiated where appropriate. The WRA's were generated as part of the licensee's actions responding to "TMI Lessons".

- 1) Review of a portion of design change 80Y118, Reactor Coolant System Venting, included WRA's E-0971-RC-Q through E-0979-RC-Q controlling fabrication and installation of head vent pipe, valves and support brackets.
- 2) WRA's reviewed as a portion of design change 80Y125, Route RHR Sump Pump Discharge to Containment, included WRA's D6644-WL-Q through D6648-WL-Q, D6650-WL-Q and D6652-WL-Q. These WRA's included hangars and RHR sump discharge pipe from the RHR pits to the shield wall area.

- 3) Reviewed WRA EO413-EE-Q, Assemble EA-180 Limit Switches with Conax Seals. Also verified traceability of material (limit switches and seals), observed assembly in the maintenance shop and observed licensee quality control audit of the WRA in progress.
- 4) Review of a portion of design change 80Y127, Safety Injection Piping Reroute included WRA's D7417-SI-Q through D7426-SI-Q controlling installation of hangars and welding pipe.

b. Observations

1) Preventive Maintenance

The inspector observed preventive maintenance in progress, including PM-3560-15 Rev.1 - New Fuel Elevator Inspection, and PM-3560-18 - Fuel Transfer System Inspection-Pit Side. These PM's are accomplished annually by replacement of the air motors for the upenders for both units, utilizing a contract diver. During the replacement of Unit 2 air motor, a small leak occurred in the diver's suit. The diver was initially frisked for contamination and none was found, however, a whole body scan found that the diver had minimal external contamination. After showering, the whole body scan was repeated with satisfactory results.

2) Design Changes

The inspectors periodically observed fitup and welding in progress for portions of design changes 80Y118, 80Y125 and 80Y127 (Paragraph 3.a above) and observed fitup and NDT of welds for a containment electrical penetration, part of design change 80Y116. The inspectors also observed licensee and contractor quality control personnel involvement in monitoring the work in progress.

3) Diesel Cooling Water Pump No. D12

The inspector observed portions of troubleshooting and testing of D12 Diesel Cooling Water Pump following trip of the diesel during preparations to shutdown the pump after an operability test. The trip was annunciated as an overspeed trip, however, no audible or visual indication of overspeed occurred. The licensee conducted additional testing and was able to repeat the trip, again with no apparent actual overspeed. The licensee disabled the overspeed trip via a lifted wire, using the plant bypass procedure, to assure that overspeed trip will not occur, pending receipt of a replacement overspeed switch.

The Operations Committee reviewed the occurrence, and determined that the pump was not made inoperable by actuation of the overspeed trip, as the overspeed trip is bypassed by the SI signal, i.e. an SI signal occurring at any time, during testing or otherwise, would bypass the overspeed trip and the diesel would continue to run or restart if shutting down. The licensee plans to forward an informational report following replacement of the switch and retesting of the system.

#### 4. Surveillance

The inspectors witnessed portions of surveillance testing of safety related systems and components. Witnessing included verifying that the tests were scheduled and performed within Technical Specification requirements, observing that procedures were being followed, that LCO's were not violated and that system restoration was completed.

Test witnessed included:

- a. SP-1091      Unit 1 Fan Coil Monthly Surveillance  
Test was satisfactory.
- b. SP-1049      Unit 2 Main Steam Safety Valve Test  
The Main Steam Safety Valve Test was conducted immediately after Unit 2 shutdown for refueling. Two safety valves that did not relieve within test specification were adjusted and retested satisfactorily.
- c. SP-1180      Diesel Cooling Water System Test  
The inspector observed portions of retest following troubleshooting of spurious overspeed trips. (Paragraph 3.b.3 above)

#### 5. I.E. Bulletins

The inspector completed review of the licensee's actions in response to the following Bulletin and verified that the required actions are complete.

- a. IEB 81-01      Surveillance of Mechanical Snubbers  
  
No INC mechanical snubbers are used in the plant. (Closed)

#### 6. Exit Interviews

The inspector conducted interim interviews during the inspection period and met with Messrs. Tierney, Watzl and Hunstad at the conclusion of the inspection. The inspector discussed the scope and results of the inspection.

The licensee confirmed that an informational report would be submitted describing the actions taken to resolve the diesel cooling water pump trips. (Paragraph 3.b.3)