



Northern States Power Company

Prairie Island Nuclear Generating Plant  
1717 Wakonade Dr. East  
Weich, Minnesota 55089

September 24, 1990

Mr B Clayton, Chief  
Projects Branch 2, Region III  
U S Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

PRAIRIE ISLAND NUCLEAR GENERATING PLANT  
Docket Nos. 50-282 License Nos. DPR-42  
50-306 DPR-60

Response to Notice of Violation  
Inspection Reports No. 50-282/90012(DRP) and 50-306/90012(DRP)

In response to your letter of August 27, 1990, which transmitted Inspection Reports No. 282/90012 and 306/90012, the following information is offered.

Violation #1

Technical Specification 3.6.H, Shield Building Ventilation System allows only one train to be inoperable with reactor coolant system average temperature above 200° F. With both trains inoperable, Technical Specification 3.0.C applies and states in part; when a Limiting Condition for Operation is not met, and required action is not specified or cannot be satisfied, within one hour initiate the action necessary to place the affected unit in a condition in which the equipment is not required to be OPERABLE.

Contrary to the above, on June 27, 1990, with Unit 1 above 200° F, from approximately 8:20 a.m. to 10:10 a.m., both the Number 11 and 12 Shield Building Ventilation Systems were rendered inoperable by the improper opening of the Number 11 exhaust fan breaker. Action was not initiated to place Unit 1 in a condition for which the Shield Building Ventilation System was not required to be operable within one hour (232/90012-02).

This is a Severity Level IV Violation (Supplement I).

Response

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Preventive maintenance was scheduled for the No. 12 Shield Building

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Ventilation System Exhaust Fan, the Recirculation Fan, and the filter heater contactors. Prior to maintenance beginning, the three respective isolation breakers were to be turned off. The breakers for the Recirculation Fan and the filter heater were properly turned off. When maintenance was to begin at 1005, it was discovered that No. 11 Exhaust Fan breaker had been turned off instead of No. 12 Exhaust Fan breaker. This made the No. 11 Exhaust Fan inoperable. Since the No. 12 Exhaust Fan (whose breaker was left on) is interlocked with No. 12 Recirculation Fan (whose breaker was turned off), the No. 12 Exhaust Fan was also inoperable. The exhaust fan can only run when the recirculation fan is running. The initial evaluation concluded that both trains of the Shield Building Ventilation System had been made inoperable, since no Shield Building Exhaust Fans were operable. At 1010, the breaker for No. 11 Shield Building Exhaust Fan was turned on.

The violation states that no action was taken within one hour to change the plant condition. Technical Specifications Section 3.0.C states, "Time limitations specified by the applicable Limiting Condition for Operation actions are measured from the time of discovery of the failure to meet the Limiting Condition for Operation." Section 3.0.C allows one hour to initiate action to place the affected unit in a condition in which the equipment is not required to be operable. No action was taken to place Unit 1 in a condition for which the Shield Building Ventilation System operability was not required, since the No. 11 Shield Building Exhaust Fan breaker was turned on within 5 minutes of discovering it in the off position.

The incorrect breaker had been turned off. The preventive maintenance procedure contained an error in component numbering. The motor number and component description given in the text of the procedure were correct, but the Motor Control Center number given at the top of each page of the preventive maintenance procedure was incorrect. The workman turned off the breaker corresponding to the incorrect Motor Control Center number.

The safeguards function of the Shield Building Ventilation System is to collect, mix and filter air leakage from the containment vessel to the annulus following a postulated accident before it is either recirculated or discharged to the atmosphere. If the Shield Building Ventilation System had been called upon to actuate while in this condition, only No. 11 Shield Building Recirculation Fan and its particulate absolute charcoal filter would have operated. However, a test performed on June 25, 1990, showed that with both exhaust fans and one recirculation fan disabled, the required drawdown and performance characteristics of the Shield Building Ventilation System detailed in Tech Spec 4.4B-1 were still met. Note that the recirculation fan provides both recirculation and exhaust flow. Flow capacity of a recirculation fan is 5000 cfm, while the flow capacity of an exhaust fan is only 200 cfm. Therefore, the Shield Building Ventilation System was capable of performing its safeguards function in this degraded condition.

This event was reported as Unit 1 LER 90-008.

Corrective Action Taken and Results Achieved

At discovery, the breaker for No. 11 Shield Building Exhaust Fan was turned on and an operability test for Train A was done. Motor Control Center preventive maintenance procedures for all other safeguards equipment were reviewed for similar errors. One other error was found and corrected.

Corrective Action to Avoid Further Violations

Routinely, isolations for Motor Control Center preventive maintenance have been performed by the personnel performing the maintenance. Procedures will be revised to involve operations personnel in the performance of equipment isolations; this will have the effect of getting another review of these isolations.

Date When Full Compliance Will be Achieved

Full compliance has been achieved.

Violation #2

Technical Specification 4.1 specifies minimum frequency and types of surveillance to be applied to plant equipment and conditions. Technical Specification 4.0 states, in part, that the specific time intervals between tests may be adjusted plus or minus 25 percent to accommodate normal test schedules. Technical Specification 4.1.A requires calibration, testing and checking of instrument channels be performed as specified by Table T.S. 4.1-1.

Contrary to the above:

- a. The instrument channels (item 32) for RTD (reactor coolant) Bypass Flowmeter are to be functionally tested monthly by Surveillance Procedure SP1042, Resistance Temperature Detector (RTD) Bypass Flowmeter Functional Monthly Test. Surveillance procedure SP1042 was due to be performed no later than April 16, 1990, and was not completed until April 24, 1990 (282/90012-03A; 306/90012-03A).
- b. The instrument channels (item 35b) for radiation monitors (listed in Table T.S. 3.15-2) are to be functionally tested monthly by Surveillance Procedure SP1028, Radiation Monitoring System Test. Surveillance Procedure SP1028 was due to be performed no later than April 18, 1990. The test was not performed until April 20, 1990 (282/90012-03B; 306/90012-03B).

This is a Severity Level IV Violation (Supplement I).

Response to Violation #2a

SP1042 is a monthly functional test of the reactor coolant system RTD bypass loop flow meters. The scheduled due date for completion of SP1042 for the month of April was April 16, 1990. Technical Specification Section 4.0 allows surveillance test due dates to be adjusted plus or minus 25% to accommodate normal test schedules. The last day of the 25% grace period for the April performance of SP1042 was April 23rd.

The I&C supervisors, one assigned to each unit, are responsible for the scheduling and performance of the I&C surveillance procedures. The Unit 1 I&C supervisor was aware that April 23 was the last day of the 25% grace period for the completion of SP1042 for the month of April. However, the Unit 1 I&C supervisor was not onsite on April 23, and he failed to assign an I&C technician to perform SP1042 prior to his departure.

The Unit 1 I&C supervisor noticed on his return to work on April 24, 1990 that SP1042 had not been performed on April 23 as required. The Unit 1 I&C supervisor immediately assigned an I&C technician to perform SP1042 and it was satisfactorily completed on April 24, 1990.

This event was reported as Unit 1 LER 90-004.

Corrective Action Taken and Results Achieved

SP1042 was satisfactorily performed immediately upon discovery that it had not been completed within the required time period.

Corrective Action to Avoid Further Violations

As a result of this event, the two I&C supervisors (one for each unit) will perform daily reviews of each other's surveillance schedules. This will provide increased assurance that surveillance procedures will be performed within the required time periods.

Date When Full Compliance Will be Achieved

Full compliance has been achieved.

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Response to Violation #2b

SP1028 is a monthly functional test of the Radiation Monitoring System. The scheduled due date for completion of SP1028 for the month of April was April 4, 1990. Technical Specification Section 4.0 allows surveillance test due dates to be adjusted plus or minus 25% to accommodate normal test schedules. The last day of the 25% grace period for the April performance of SP1028 was April 11, 1990, but the test was not done until April 20, 1990.

Plant surveillance testing is done in accordance with a master surveillance schedule. The Radiation Protection group uses the master schedule to generate their own surveillance schedule which is then incorporated into an all-inclusive work schedule for the group.

On March 15, 1990 the plant Quality Assurance group pointed out, for a few surveillance procedures, that there were discrepancies between the due dates shown on the master surveillance schedule and the Radiation Protection group schedule. Between March 15 and March 21, 1990, the Radiation Protection Supervisor and the plant Surveillance Coordinator conferred to resolve the discrepancies. As a result, both the master schedule and the Radiation Protection group's schedule were changed. SP1028 was rescheduled from April 4 to April 25, 1990. The Surveillance Coordinator pointed out the need for an additional test, since the new due date had been advanced three weeks. Later discussions between the Radiation Protection Supervisor and his supervisor resulted in the mistaken belief that the additional test was not required and was not performed.

Radiation Protection personnel misunderstood the necessity for performing an additional test. Contributing to the cause was the lack of a written policy on rescheduling surveillance tests.

This event was reported as Unit 1 LER 90-010.

Corrective Action Taken and Results Achieved

Plant administrative control documents governing surveillance schedules have been modified to prevent the need for similar rescheduling.

Corrective Action to Avoid Further Violations

Procedures governing surveillance schedule changes will be in place by October 31, 1990.

Date When Full Compliance Will be Achieved

Full compliance has been achieved.

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Please contact us if you have any questions related to our response to the subject inspection reports.



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