



Northern States Power Company

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June 11, 1990

Mr Brent Clayton, Chief  
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U S Nuclear Regulatory Commission  
799 Roosevelt Road  
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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. 50-282/90004(DRP) and 50-306/90004(DRP)

In response to your letter of April 20, 1990 which transmitted Inspection Reports No. 282/90004 and 306/90004, the following information is offered. The 30-day response period was extended to June 11, 1990 by verbal communication between Bruce Burgess of your office and Jack Leveille, Prairie Island Licensing Engineer. The extension was sought because we discovered new information which required follow-up verification from personnel who are not assigned to the Prairie Island site and were not immediately available for interviews.

Violation

Technical Specification 3.6.E.2 states, in part, that openings in the Auxiliary Building Special Ventilation Zone (ABSVZ) are permitted provided they are under direct administrative control and can be reduced to less than ten square feet within six minutes following an accident.

The administrative control specified by Operations Procedure D54, Control of Openings in the ABSVZ Boundary, Revision 4, requires that a log shall be kept in the control room which specifies the size and location of all openings in the ABSVZ, including the time and date that openings are made and when they are closed.

Contrary to the above between the dates of January 17, 1990, and February 15, 1990, the installation and removal of the eddy current cable connection flange created an opening in the ABSVZ which was not administratively controlled in that the opening was not logged to indicate the size, location, time and date that the opening was made or closed.

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This is a Severity Level IV Violation (Supplement 1).

#### Response

Between the dates of January 17 and February 15, 1990, Unit 1 was in cold shutdown for refueling and Unit 2 was at power operation. Flanges on a Unit 1 containment penetration were removed and installed twice. Each time a flange was removed and prior to the re-closure of the penetration, an opening in the Auxiliary Building Special Ventilation Zone boundary existed. During flange removal, the Auxiliary Building Special Ventilation System was required to be operable for Unit 2. Technical Specifications allow openings in the boundary as long as they are administratively controlled and that the total open area can be reduced to less than ten square feet within six minutes.

The Auxiliary Building Special Ventilation Zone is common to both Unit 1 and Unit 2. The function of the system is to maintain a negative pressure within the Auxiliary Building Special Ventilation Zone under accident conditions. Openings in the Auxiliary Building Special Ventilation Zone boundary if left open and if larger than 10 square feet could defeat the function of the Auxiliary Building Special Ventilation Zone. The potential flow path of air associated with this violation would have been 1) through the Unit 1 airlock into the Unit 1 containment 2) through the containment pressurization penetration into the Auxiliary Building Special Ventilation Zone. Since the cross sectional area of this penetration (0.5 square feet) is less than 10 square feet, the function of the Auxiliary Building Special Ventilation Zone would not have been defeated. However, there was no administrative control for these two breaches of the Auxiliary Building Special Ventilation Zone boundary.

Three work requests were written by two operations system engineers. Work request #1 authorized the removal of the blank flange, required logging of the opening (this logging was to remain in effect until cleared by work request #3), and authorized other work unrelated to this particular penetration, in accordance with Operations Procedure D61, Containment Penetration Outage Preparation and Outage Restoration Procedure. Work request #2 authorized the installation and later removal of the cabling flange as well as similar work for other penetrations. Work request #3 authorized the reinstallation of the blank flange, the clearing of the log for the opening, and similar work for other penetrations, in accordance with D61.

The control room shift supervisor gave approval for work to commence on work requests #1 and #2. The maintenance crew with work request #2 reached the penetration first, and upon finding the blank flange in place, removed it and installed the cabling flange. Due to procedural ambiguities, the maintenance personnel thought that removal of the blank flange was within the scope of the work request. Since this work request did not intend to authorize the removal of the blank flange, it also did not provide for administrative control of the opening in the Auxiliary Building Special Ventilation Zone. To the best of our knowledge, the opening existed for several minutes when neither flange was in place.

When the maintenance crew with work request #1 reached the penetration, they found the blank flange had already been removed, so they performed only the other work specified on the work request. By so doing, the procedure section for removing the subject blank flange was not completed. It was this section which required logging of the opening.

When the eddy current cables were no longer needed, the cabling flange was removed per work request #2 and the blank flange was reinstalled. Although reinstallation of the blank flange was not intended to be authorized by this work request, the maintenance personnel again reasonably assumed that it was within the scope of the work. The opening again was not logged during the time that neither flange was in place since work request #2 did not address logging because logging was addressed by the other two work requests. To the best of our knowledge, the opening existed for less than one hour before being closed.

The cause of the violation was that work was performed outside the scope of work intended by the system engineer, thereby inadvertently bypassing the administrative controls for that work. Contributing to both of these instances of an uncontrolled opening were: 1) ambiguity in work request #2 which permitted a broader interpretation of the scope of work than was intended and 2) failure to coordinate the work performed under the three work requests. Contributing to the second instance was the failure of maintenance personnel (associated with work request #1) to report to supervisory personnel that the flange they were to remove had already been removed.

#### Corrective Action Taken and Results Achieved

There was no corrective action taken at the time of the openings, since it was not known that Technical Specification requirements were being violated until after compliance had been re-established by replacing the blank flange.

#### Corrective Action To Be Taken To Avoid Further Violations

Training will be provided to operations system engineers on inadequacies of the procedures/work requests used to perform this work.



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Training will be provided to maintenance personnel which will emphasize the need to report instances of plant conditions which are different than those anticipated.

We will also make the following improvements:

Operations Procedure D61, will be revised to more clearly identify the requirements for logging openings.

The procedure contained in work request #2 will be clarified and made into a standing (permanent) procedure. The improvements in this procedure will provide the steps which will establish coordination for the work.

The containment pressurization penetration blank flanges will be tagged with an information tag stating the logging requirements.

The above corrective actions will be in place before the next refueling, scheduled for September 1990.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.

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

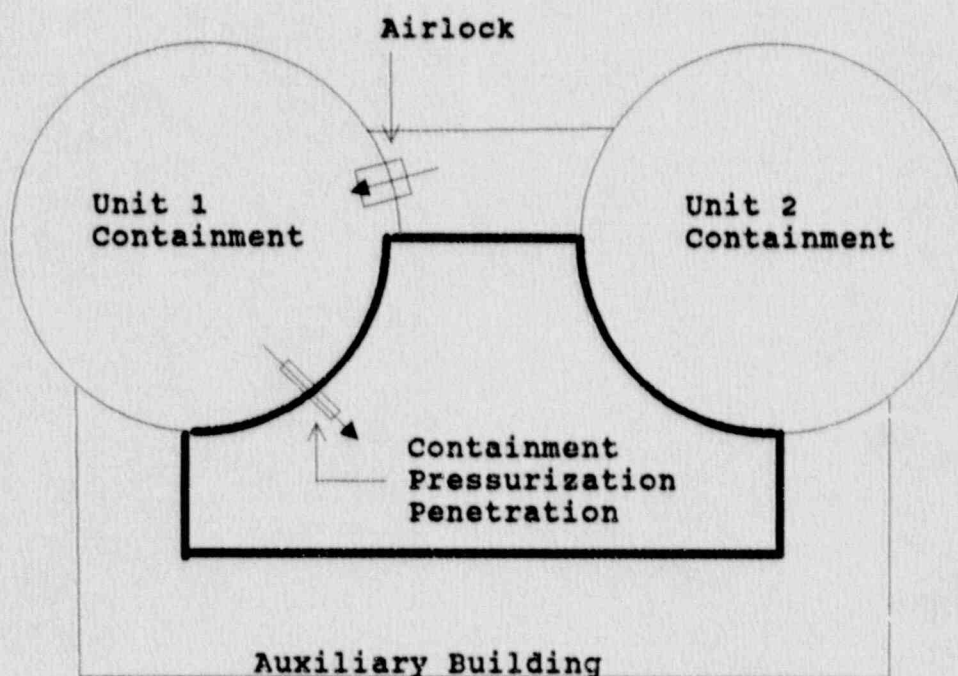
*Gerald H. Neils for C E Larson*

C E Larson  
Vice President  
Nuclear Generation

c: Regional Administrator III, NRC  
Senior Resident Inspector, NRC  
NRR Project Manager, NRC  
G Charnoff

Figure

Leakage Path Created By the Removal  
of the Unit 1 Containment Pressurization  
Flange



— Auxiliary Building Special Vent Zone  
Boundary

→ Potential Flow Path