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June 1, 1992

10 CFR Part 2
Section 2.201

U.S. Nuclear Regulatory Commission
ATTN.: Document Control Desk
Washington, DC 20555

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

Reply to a Notice of Deviation
NRC Inspection Report No. 306/92009
Loss of RHR Flow during Shutdown

Pursuant to the provisions of 10 CFR Part 2, Section 2.201, the following is submitted in response to the notice of deviation contained in your letter of April 30, 1992.

Deviation:

In the attachment to your letter of January 6, 1989, "Response to Generic Letter 88-17 Loss of Decay Heat Removal", you committed to perform a modification to provide two independent reactor coolant system (RCS) level indications, with installation to be completed for Unit 2 during the September 1990 refueling outage.

Contrary to the above, on January 3, 1990 you issued modification package 86Y740, "RCS Loop Level Indication", for Unit 2 which did not provide for two independent RCS level indications. The modification, as installed during the September 1990 Unit 2 refueling outage, did not provide two independent RCS level indications. Specifically, both channels of electronic RCS level indication installed by the modification were pressure compensated from the same pressure transmitter.

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Reason for the Deviation

Modification 86Y740 "RCS Loop Level Indication" was issued to install two independent level indicators for the Reactor Coolant System while in the reduced inventory condition. Independence was lost when one reactor pressure indication (sensed at the Pressurizer Relief Tank) was used to compensate the level instruments for reactor pressure.

The plan to use one instrument to compensate both readings challenged the independence of the design. There was only one suitable reactor pressure indication--the Pressurizer Relief Tank pressure instrument--available to provide the information for compensation. The modification engineers failed to realize that the use of one pressure instrument for compensation would remove the independency of the two level instruments. This oversight by the modification engineers is an isolated occurrence.

Corrective Actions Taken and Results Achieved

Procedures were developed prohibiting the use of nitrogen overpressure during reduced inventory operations for the rest of the February 1992 refueling outage. The pressure compensation from the Pressurizer Relief Tank used in the process computer was defeated. These actions provided independent instrumentation for the remainder of the February refueling outage as there was no need for pressurized reduced inventory operations while pressurized

Corrective Action To Be Taken To Avoid Further Deviations

For future reduced inventory operations, we will assure that independent level instrumentation is available. The long term solution is to add a non-intrusive level indication system on the hot leg. If reduced inventory operations are necessary prior to installation of this modification, the reactor coolant system will be vented to containment atmosphere prior to entry into reduced inventory operations. No pressure compensation is required in the vented condition where the existing instruments provide independent indication.

The new instrumentation may only provide indication of level in the hot leg. We interpret this to comply with the intent of Generic Letter 88-17 even though level above the hot leg will not be able to be quantified.

Date When Corrective Action Will be Completed

We will provide non-intrusive hot leg level indication prior to the next planned entry into a Reduced Inventory condition for either unit. If the hot leg level indication is needed and not available, the core will be unloaded.

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Please contact us if you have any questions or wish further information concerning this matter.



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