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August 9, 1985

Director
Office of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Washington, DC 20555

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

Information Required for NRC Review of Inservice Inspection and Testing Program and Requests for Relief from ASME Code Section XI Requirements

The purpose of this letter is to request relief, in accordance with 10 CFR Part 50, Section 50.55a(g)(6)(i), from requirements of the ASME Boiler and Pressure Vessel Code, Section XI, Inservice Inspection, as specified in the Prairie Island Inservice Inspection and Testing Program for the First Ten-Year Interval, submitted to the Commission on February 1, 1978.

NRC Staff review and approval is being requested for a revision to an existing Unit 2 Request for Relief (No. 29) and for a new Unit 2 Request for Relief (No. 66). The components affected by the relief requests, the basis for the requests, and the alternative inspections proposed are provided in Attachments 1 and 2 to this letter.

These changes are being incorporated, as Revision 11, into the Prairie Island Inservice Inspection and Testing Program for the First Ten-Year Interval. Because the visual inspection of the Darling gate valve, addressed in the new request for Relief (No. 66), can only be performed with the fuel removed from the reactor vessel, we ask that the NRC Staff review of that item be completed prior to the beginning of the Prairie Island Unit 2 Ten Year Outage, now scheduled to begin September 5, 1985. That would allow time for that inspection to be performed during the Unit 2 outage, should the relief request not be granted.

Rec'd w/ check for $150.00

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Attached is a check in the amount of $150.00 as required by 10 CFR Part 170 for the application fee.

Please contact us if you have any questions related to these Requests for Relief.

David Musolf
Manager - Nuclear Support Services

DMM/EFE

c: Regional Administrator-III, NRC
NRR Project Manager, NRC
Resident Inspector, NRC
State of Minnesota (H Baron)
Hartford Insurance (S Tack)
G Charnoff - w/o attachment

Attachments

Director of NRR
August 12, 1985
Attachment 1

Revision To Unit 2 Request for Relief No. 29

Component

Request for Relief No. 29 is being revised to include all Class 2 charging line piping downstream of valves 2VC-7-11 and 2VC-7-10 shown on Prairie Island drawings NF-39837 and NF-39836. This includes 35 feet of 2" pipe between valves 2VC-7-11 and 2VC-7-10 and the downstream check valve 2VC-8-1 (located outside the containment building) and 4 feet of 3/4" stainless steel line inside the containment. The 2" piping in question is a portion of the charging line just upstream of the regenerative heat exchanger. The 3/4" piping is a bypass line around the control valve in the charging line to the cold leg, just downstream of the regenerative heat exchanger.

Basis for Relief Request

The Class 2 piping described above is being included in Request for Relief No. 29 because it is unisolatable from Class 1 piping. The charging line control valves to the loop and auxiliary spray on the regenerative heat exchanger outlet are not designed to hold the hydrostatic test differential pressure required by IWC-5000 for the Class 2 piping in question (3,010 psig). These valves are listed as "Isolation and Relief" valves on the system logic diagrams.

In order to test the lines in question, to the required Class 2 pressure, freeze plugs would have to installed in the charging line to the cold leg, downstream of the 3/4" bypass line and in the charging line to the auxiliary spray downstream of the regenerative heat exchanger discharge control valve. Freeze plugs were installed during the hydrostatic testing of the same piping on Unit 1 (January 1985 Refueling Outage) after it was found that the control valves described above would not hold the hydrostatic test pressure.

While this method was successful, plant personnel are reluctant to utilize freeze plugs for any reason unless it is absolutely necessary, and we believe that the installation of a freeze plug is an extraordinary means of testing, and in this case is a potentially unsafe practice. Because of the elevated test pressure, there is the possibility of the freeze plug breaking loose and traveling down the line to damage downstream piping and/or valves. Additionally, the installation of freeze plugs as described above, blocks one of the boric acid injection paths to the reactor coolant system for the duration of the test, and for the time required for the freeze plug to completely thaw (approximately 24 hours). While an alternate path is available, it is not in the interest of plant safety to unnecessarily degrade a safety system for that length of time.

The benefits gained by hydrostatically testing the lines in question to the requirements of IWC-5000, cannot justify the potential risks involved in the use freeze plugs during that testing, particularly in light of the alternative testing proposed below and the fact that during normal operation this piping is pressurized to in excess of the reactor coolant system pressure, allowing any leakage to be readily identified.

ALTERNATIVE TESTING

The unisolatable Class 2 piping will be tested to the Class 1 requirements, that is:

1. The unisolated portions of the Class 2 piping will be visually examined for evidence of leakage at the system nominal operating pressure (approximately 2,500 psig) in accordance with the requirements of IWB-5221. This inspection will be performed prior to startup following each refueling outage.

2. The unisolated portion of the Class 2 piping will be hydrostatically tested (to approximately 2,600psig) when the Class 1 piping is tested.

Director of NRR
August 12,1985
Attachment 2

Request for Relief No. 66

COMPONENT

Darling 10" motor operated gate valve, located in the Unit 2 residual heat removal B return line (Loop B Return Isolation Valve, MV-32169).

BASIS FOR RELIEF REQUEST

The Summer 1974, 1975 Addenda of the ASME Code (basis for Prairie Island ISI/IST Program for the First Ten Year Interval) requires the visual inspection of the internal pressure boundary surfaces of valves of the same constructural design, e.g., globe, or check valves, manufacturing method, and manufacturer, that perform similar functions in the system. Relief from these requirements is being requested so the disassembly of the valve described above will not be required during the Unit 2 refueling outage scheduled for September 1985. This request is based on the following:

1. The changes from the 1974 Summer 1975 Addenda to the 1980 Winter 1981 Addenda to the ASME Code has deleted the "Manufacturer" from its requirements.

2. The inspection of valve MV-32169 would represent a 100% inspection of the Darling M.O. gates valves since there is only one used in Unit 2. The inspection of the other affected Class 1 valves will result in inspection of only 25-50% of the total number of valves per each manufacturer.

3. The same valve on Unit 1 was inspected during the January 1985 Unit 1 refueling outage. No evidence of wear, erosion, corrosion, or any other discrepancies were noted during that inspection.

4. Inspection of the Darling valve in question will require that a seal weld be cut for disassembly and then replaced following inspection.

5. There is only single valve isolation between valve MV-32169 and the refueling canal, which will be flooded at the time of the inspection. This isolation is provided by a check valve designed to seal at much higher pressure and temperature than will be present at the time of inspection.

The benefits gained by inspection of valve MV-32169 cannot justify the difficulty and potential risks involved with the inspection of that valve. Particularly when inspection of that valve is not required by more recent revisions of the ASME Code and when inspection of the same valve on Unit 1 found no problems.

ALTERNATIVE TESTING

A motor operated gate valve from a different manufacturer will be inspected during the September 1985 Unit 2 refueling outage. If leak or hydrostatic testing of the residual heat removal system shows evidence of a possible problem, then the respective valve(s) would be disassembled for inspection and/or maintenance.