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UNITED STATES NUCLEAR REGULATORY COMMISSION

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT NUCLEAR STATION, UNIT 2

DOCKET NO. 50-410

NOTICE OF ENVIRONMENTAL ASSESSMENT

AND FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an exemption from the requirements of 10 CFR 50 Appendix A, General Design Criterion (GDC) 55, to the Niagara Mohawk Power Corporation (the applicant) for the Nine Mile Point Nuclear Station, Unit 2 (NMP-2), located at the applicant's site in Scriba, New York.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action:

The proposed action would provide an exemption from a Commission regulation. The exemption would allow the applicant to use two simple check valves (spring closing) outside containment to isolate penetrations Z-38A and B.

Pursuant to GDC 55 of 10 CFR 50 Appendix A, each line that is part of the reactor coolant pressure boundary and that penetrates primary reactor containment shall be provided with containment isolation valves as follows, unless it can be demonstrated that the containment isolation provisions for a specific class of lines, such as instrument lines, are acceptable on some other defined basis:

(1) One locked closed isolation valve inside and one locked closed isolation valve outside containment; or

(2) One automatic isolation valve inside and one locked closed isolation valve outside containment; or

(3) One locked closed isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment; or

(4) One automatic isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment.

Contrary to Item (4), the applicant has proposed using two simple check valves (spring closing) for the outside isolation valves (and one check valve for the inside isolation valve) for penetrations Z-38A and B. These penetrations are for the Control Rod Drive (CRD) Hydraulic lines to the Reactor Recirculation Seal Purge equipment. The applicant has requested an exemption from this requirement for the lines identified above based on the function of of these lines.

The applicant's request for this exemption, and the basis therefor, are contained in its letter dated May 15, 1985.

The Need for the Proposed Action:

The control rod drive hydraulic system for NMP-2 supplies water to the recirculation system for purging of the pump seals. This water cleans and cools the seal area to ensure proper operation during normal plant conditions. Continued recirculation pump seal purge is necessary whenever reactor coolant temperature is above 200°F and the pump is not isolated. This prevents premature aging and possible damage to the pump seals due to high temperature.

The check valves provide containment isolation while permitting seal purge. The check valves are designed such that they are held shut by a spring under no-flow conditions. This isolation valve arrangement for the seal purge line is similar to other BWR-5 plants.

The system leakage boundary leak path does not directly communicate with the environment following a loss-of-coolant accident. The system leakage boundary piping components are designed in accordance with Quality Group B standards as defined by Regulatory Guide 1.26, are designed to meet Seismic Category I design requirements, and are designed for protection against pipe whip, missiles and jet forces in a manner similar to that for engineered safety features. The system leakage boundary is continually pressurized to reactor pressure; and, therefore, system integrity is continually demonstrated during normal plant operations. In addition, TMI Item II.K.3.25, "RCS Pump Seal Design," addresses the importance of providing a source of coolant to the seals by indicating that a loss of seal coolant with resultant seal failure may be the cause for a small LOCA inside containment.

For these reasons, the staff believes that automatic isolation valves are not necessary for this system. The benefits gained by providing check valves outweigh the disadvantages since the check valves provide for a more reliable flow of coolant to the seals in a plant condition which calls for containment isolation. If automatic isolation valves were used, an isolation signal would isolate the seal purge line.

Environmental Impacts of the Proposed Action:

The exemption would permit the applicant to use two simple check valves outside containment to isolate penetrations Z-38A and B (CRD Hydraulic lines to the Reactor Recirculation Seal Purge equipment). Because of the essential nature of these lines, i.e., supplying a source of coolant to the Reactor Recirculation Pump seals, the staff believes that the benefits gained by providing check valves instead of automatic isolation valves for these lines outweigh the disadvantages since the check valves will allow a flow of coolant to the Reactor Recirculation Pump seals in the event that the automatic containment isolation valves receive a signal to isolate the containment.

The granting of the exemption will not affect the risk of facility accidents, thus the post-accident radiological releases will not be greater than previously determined, nor does the proposed relief otherwise affect radiological plant effluents, nor result in any significant occupational exposure. Likewise, the relief does not affect non-radiological plant effluents and has no other environmental impact. Therefore, the Commission concludes that there are no significant radiological or non-radiological environmental impacts associated with the proposed exemption.

Alternative to the Proposed Action:

Because the Commission has concluded that there is no measurable environmental impact associated with the proposed exemption, any alternatives to the exemption will have either no environmental impact or greater environmental impact. The principal alternative would be to deny the requested exemption.

Such action would not reduce the environmental impact of the operation of NMP-2 and would result in an increased potential of damage to the Reactor Recirculation Pump seals.

Alternative Use of Resources

These actions do not involve the use of resources not previously considered in connection with the "Final Environmental Statement Related to Operation of Nine Mile Point Nuclear Station, Unit No. 2" dated May 1985.

Agencies and Persons Consulted:

The NRC staff reviewed the licensee's request that supports the proposed exemption. The NRC staff did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the foregoing environmental assessment, we conclude that the proposed actions will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed exemption.

For further details with respect to the action, see the applicant's request for the exemption dated May 15, 1985, which is available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. 20555 and at the Penfield Library, State University College, Oswego, New York 13126.

Dated at Bethesda, Maryland this 11th day of April 1986.

FOR THE NUCLEAR REGULATORY COMMISSION

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