

NIAGARA MOHAWK POWER CORPORATION / 300 ERIE BOULEVARD WEST. SYRACUSE, N.Y. 13202/TELEPHONE (315) 474-1511

April 4, 1986 (NMP2L 0678)

Mr. R. W. Starostecki, Director U.S. Nuclear Regulatory Commission Region I Division of Reactor Projects 631 Park Avenue King of Prussia, PA 19406

> Re: Nine Mile Point - Unit 2 Docket No. 50-410

Dear Mr. Starostecki:

Enclosed is a final report, in accordance with 10CFR50.55(e), for the problem concerning Secondary Containment Pressure Drawdown Time following a loss of coolant accident. This problem was reported via tel-con to L. Doerflein of your staff on March 3, 1986.

Very truly yours,

amanzan

C. V. Mangan Senior Vice President

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CVM/GG/cla (1521H)

xc: Director of Inspection and Enforcement U.S. Nuclear Regulatory Commission Washington, DC 20555

> R. A. Gramm, NRC Senior Resident Inspector NMPC Project File

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NIAGARA MOHAWK POWER CORPORATION NINE MILE POINT - UNIT 2 DOCKET NO. 50-410

Final Report For a Problem Concerning Secondary Containment Pressure Drawdown Time Following a Loss of Coolant Accident

Description of the Problem

The reactor water cleanup system incorporates some equipment locate' within secondary containment (heat exchangers, pump, vessels) which are not seismically supported. Considering simultaneous loss of coolant accident and safe shutdown earthquake, a failure of reactor water cleanup system components within secondary containment could considerably increase the secondary containment pressure drawdown time and consequently, the radiation dose outside the building could exceed IOCFR100 limits.

Analysis of Safety Implications

The secondary containment pressure drawdown time following a loss of coolant accident and seismic event is calculated as part of the plant loss of coolant accident analysis as described in Final Safety Analysis Report Section 6.2.3. This event does not consider a coincident high energy line break within the secondary containment boundary. The secondary containment pressure drawdown time based on the above scenario is about 2 minutes. The radiological consequences associated with 2 minutes of direct leakage from the secondary containment to the outside environment are a small fraction of the offsite dose limits of lOCFR100 and less than the control room guidelines set by lOCFR50, Appendix A. General Design Criteria 19.

With this design, if simultaneous loss of coolant accident and safe shutdown earthquake is considered, reactor water cleanup system equipment nozzles may rupture within the reactor building resulting in secondary containment pressure drawdown time of about 23 to 26 minutes depending upon the reactor water cleanup system break location. The radiological consequences associated with this event could exceed the IOCFRIOO limit at the exclusion area boundary and General Design Criteria 19 guideline for the control room, while remaining within the IOCFRIOO limit at the low population zone.

Based on the above, if the described design had remained uncorrected, the safety of operations of the plant could have been adversely affected.

Corrective Action

Stone & Webster has analyzed General Electric supplied reactor water cleanup system equipment to determine if it will maintain pressure integrity under safe shutdown earthquake events.

As a result, the addition of lateral supports is required for each of the vessels (filter-demineralizers). The regenerative heat exchanger required additional welding metal between the baseplate and floor embedment. These changes are incorporated through Engineering and Design Coordination Report Nos. Z93,133 and Z93,141.