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FACIL:50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
AUTH.NAME AUTHOR AFFILIATION
MANGAN,C.V. Niagara Mohawk Power Corp.
RECIP.NAME RECIPIENT AFFILIATION
ADENSAM,E.G. BWR Project Directorate 3

SUBJECT: Forwards info necessary to resolve NRC response to util 860719 comments on SER.Revised FSAR Pages 9.1-7,10.4-19 & 10.4-19a also encl.

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NIAGARA MOHAWK

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

September 18, 1986
(NMP2L 0879)

Ms. Elinor G. Adensam, Director
BWR Project Directorate No. 3
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Washington, DC 20555

Dear Ms. Adensam:

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

In a September 3, 1986 letter from M. F. Haughey to C. V. Mangan the Nuclear Regulatory Commission staff provided responses to a number of the Safety Evaluation Report comments we identified in our letter dated July 16, 1986. During subsequent discussions with your staff, informal responses were provided for several of these staff comments. This letter formally transmits the information necessary to resolve Section I, Item 5, and Section II, Items 15, 49, 69, 88, 90, 109, 120, 121, and 135.

Very truly yours,

CVMangan

C. V. Mangan
Senior Vice President

LL/ps
2058G

xc: W. A. Cook, NRC Resident Inspector
Project File (2)

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)

Niagara Mohawk Power Corporation) Docket No. 50-410

(Nine Mile Point Unit 2))

AFFIDAVIT

C. V. Mangan, being duly sworn, states that he is Senior Vice President of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

C V Mangan

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 18th day of September, 1986.

Janis M. Macro
Notary Public in and for
Onondaga County, New York

My Commission expires:
JANIS M. MACRO
Notary Public in the State of New York
Qualified in Onondaga County No. 4784555
My Commission Expires March 30, 1987

Section I

Item 5 Our original comment was to clarify references used in the SER and FSAR relating to SER page 6-52, Items C.1.A and C.1.B. Since both the NEDE and NUREG documents referenced apply, we withdraw our comment.

Section II

Item 15 Niagara Mohawk withdraws their comment. While statements in the SER relating to valve stems are correct, there is additional justification provided in the FSAR on page 3.5-5. Our initial comment was to include this additional justification in the SER.

Item 49 Niagara Mohawk withdraws this comment to SER page 6-24. The combustible gas control system is designed to limit oxygen concentration to 5 volume percent within the primary containment following a postulated LOCA.

See our additional comment for Item 69.

Item 69 We withdraw our comment. For further clarification, one of the two 100% capacity recombiners is manually initiated following a LOCA to prevent oxygen or hydrogen concentration from exceeding 5 volume %. This is consistent with other portions of the SER, specifically SER page 6-25, paragraph 3, which states "The recombiner system consists of two redundant 100% capacity systems which will be manually activated when the oxygen or hydrogen concentration reaches 4.5%." Additional justification for manual initiation on oxygen or hydrogen concentration is also provided on SER page 6-25.

Item 88 Our reference, originally provided, for the spent fuel pool cooling and clean-up system was not sufficient. The information required to make the requested change can be found on FSAR page 9.1-15 and Appendix 3C page 3C-26.

Item 90 Enclosed is a change to FSAR page 9.1-7 to clarify the connections in the spent fuel pool. This change makes the FSAR and SER consistent.

Item 109 The egress lighting system design is 0.5 foot candles minimum and the emergency battery pack's lighting meets the SER. This clarifies our original comment and we agree that a change to the SER is not necessary.

Item 120 To verify the integrity of watertight doors and penetrations, to prevent flood damage to safety related equipment in the event of a rupture of the circulating water system, the following will be provided. A door alarm will be provided on the watertight door. If the alarm has not been installed prior to fuel load, a continuous door watch will be maintained on the door until the door alarm is installed.

A visual inspection will be performed on the door seals once every six months. Once every 18 months, a seal verification test will be performed (such as seal bluing).

The penetration seals will be verified operable once every 18 months (similar to Technical Specification 4.7.8.1). Breach permits will be used to ensure a penetration is resealed after maintenance or repair. These measures described above will be incorporated in Administrative Procedures and other applicable procedures.

An FSAR change is attached.

Item 121 Our original comment regarding the feedwater valves related to information provided in a letter dated August 29, 1985 (NMP2L 0480). Each feedwater line has two swing check valves and a motor operated gate valve. The actual feedwater isolating configuration is shown in FSAR Table 6.2-56 and Figure 6.2-70.

Item 135 A response to this item was provided under separate cover dated August 29, 1986 (NMP2L 0858).

and prevents the uncontrolled loss of contaminated water into the reactor building.

Loading combinations as identified in Section 3.8.4.4.1 are used to develop concrete strains against the SST liner. The SST liner analysis incorporates these concrete strains, concrete placement loads, thermal loads, hydrostatic loads, static loads and seismic loads. The calculated SST liner strains are within the allowables set forth in the ASME Code, Section III, Division II, 1977 edition Subsection CC.

The refueling canal, which connects the spent fuel pool with the reactor head cavity, is sealed by two gates in series with a monitored drain between them. This arrangement will permit the monitoring of any leaks and allow a gate seal to be repaired, if necessary.

No connections are provided to the spent fuel pool below the normal water level that may cause the pool to be drained and, therefore, the fuel would not be uncovered should these lines fail. Two skimmer surge tanks are provided to accommodate water displacement due to the installation or removal of large items into the spent fuel pool. Sparger lines are equipped with check valves and siphon breakers to prevent siphoning of the spent fuel pool water in the event of a pipe break. The elevation of the spent fuel storage facility will preclude the possibility of flooding.

The arrangement of the refueling area has been designed to preclude the movement of any heavy loads over the spent fuel pool. Interlocks and travel restriction devices on the reactor building polar crane (RBPC) prevent its use over the spent fuel pool when transferring heavy loads.

The shipping cask storage location is structurally separated from the spent fuel pool and allows for underwater transfer of fuel. The cask storage area is lined with stainless steel independent of the spent fuel pool. The spent fuel pool is connected to the cask storage area by a canal that can be sealed, by two gates in series, when the shipping cask is to be removed. Travel restrictions on the RBPC ensure that the shipping cask will not travel over the spent fuel pool. The spent fuel pool and any stored fuel assemblies are isolated from a postulated fuel cask handling accident.

The spent fuel storage racks will be installed in phases as storage needs dictate. Figure 9.1-3 outlines the storage racks for installation prior to fuel load. This is designated as Phase I and will provide storage for approximately 2,500 fuel assemblies. Future rack installation is desig-

These valves can also be operated by a switch from the control room and locally by means of a handwheel.

If a rupture occurred at a condenser expansion joint, the escaping water would first fill the jacket, then accumulate in the retention pit around the condenser. This pit is provided with a sump and level alarm. A deluge of water immediately activates the high level alarm of the sump. The metal jacket protecting the expansion joint will allow approximately 17 gpm to discharge into the surrounding retention pit. The sump pump is of adequate size to prevent overflowing from the retention pit. Furthermore, once a rupture is determined, the operator can manually stop the circulating water pumps and close the pump suction and condenser outlet valves. The circulating water pump pit is physically separated by elevation from any essential safety-related equipment necessary for safe shutdown. Therefore, no essential safety-related equipment would be affected, and safe shutdown could be accomplished.

If a circumferential rupture occurred simultaneously in a condenser expansion joint and jacket or a break occurred in the circulating water piping, up to 100,000 gpm could be discharged into the turbine building at el 250 ft 0 in. A loss of condenser cooling water of this magnitude could cause a vacuum loss, activating alarms in the main control room. Sump alarms would also activate. As described above, operator action could limit the flooding into the building. However, if the leakage continues, the water would spill over the turbine building floor and seek the lowest possible level. Tunnels running below the turbine building floor (el 250 ft-0 in) would experience flooding; however, no safety-related equipment necessary for safe shutdown would be affected.

The control and reactor buildings' tunnel interfaces are sealed by a watertight door and penetrations to protect safety-related equipment in these areas.

As the tunnels fill up and the water level rises in the turbine building, an equilibrium level of elevation 257 ft. will be reached between the water level in the cooling tower basin and the flood level within the turbine

generator building. All safety-related equipment necessary for safe shutdown in the affected buildings is located above the 257 ft. elevation and would not be affected.

In conclusion, a complete circumferential expansion joint or pipe break in the circulating water system inside the turbine generator building would have no effect on safety-related equipment

10.4.5.4 Testing and Inspection Requirements

All active components of the circulating water system are accessible for inspection and testing during station operation. The expansion joint metal jackets are equipped with a 3/8-in diameter telltale type hole providing indication of a ruptured expansion joint.

10.4.5.5 Instrumentation Requirements

Description

Instruments and controls are provided for automatic and manual control of the circulating water system. The controls and monitors described below are located in the main control room. The control logic is shown on Figure 10.4-8.

Operation

Circulating water pumps are started manually. Interlocks prevent starting a pump when the suction valve is not fully open, the suction pressure is low, the seal water pressure is low, the condenser discharge valve is not fully closed, or the condenser discharge water box level is low. The pumps trip automatically when the suction valve is not fully open, the suction pressure is low, or the condenser discharge valve is greater than 90 percent closed. The pumps can also be stopped manually.