UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 20 1986

MEMORANDUM FOR: Elinor G. Adensam, Director
BWR Project Directorate #3
Division of BWR Licensing

FROM: Marvin W. Hodges, Chief
Reactor Systems Branch
Division of BWR Licensing

SUBJECT: NIAGARA MOHAWK POWER CORPORATION (NMPC) COMMENTS ON THE NMP-2 SER AND SUPPLEMENTS 1 AND 2

We reviewed the NMPC comments as requested by your memorandum dated July 25, 1986. Our response is enclosed. Please note that all of the NMPC comments are quoted verbatim. We tried to understand them as best we could, although several are unclear.

Item 146 requires a NMPC response.

M. Wayne Hodges

Marvin W. Hodges, Chief
Reactor Systems Branch
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Enclosure:
As stated

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ENCLOSURE

RSB RESPONSE TO NMPC COMMENTS ON THE NMP-2 SER AND SSERS

SER COMMENTS

Section 1

NMPC COMMENT

3. Page 5-18, Sixth paragraph, first line says, "Isolation between the reactor coolant system and RCIC is provided by two check valves." The word "testable" should be added (FSAR page 5.4-19, Rev. 0) between the words "two" and "check."

The next paragraph indicates that the applicant performed an analysis assuming 25 gallons per minute leakage to determine leak detection setpoints.

The Nine Mile 2 equipment area and pipe chase area leak detection system temperature element setpoints were selected to ensure that detection and isolation of a high energy line break would occur in sufficient time and to ensure that the environmental qualification temperature profiles would not be exceeded, based upon a number of factors including the design of the equipment area cooling system. In addition, the setpoints were set sufficiently above the expected peak abnormal area temperature for a given area to minimize the occurrence of spurious trip signals. Ref. Q&R 440.16 (AMD 23).

This leak detection system would prevent the RCIC system inadvertent isolation because of high differential temperature in the equipment area. The high differential temperature equipment has been removed from Nine Mile Point Unit 2. FSAR pg. 7.3-16 (AMD 23) and 7.3-17 (AMD 23).

RSB Response

The words "testable" should be added between the words "two" and "check." Page 5-18, seventh paragraph, last sentence, "differential" should be deleted since the licensee removed the high differential temperature trips.

SECTION II

NMPC Comment

27. Page 4-4, second paragraph - NEDO 24011-A-4 is incorrectly referenced. It should be NEDE. Because this was a general statement by NRC no corresponding FSAR.

RSB Response

NEDO 24011-A-4 is incorrectly referenced. It should be NEDE.

NMPC Comment

28. SER pg. 4-7, last sentence of SEC. 4.4.3 - After "larger," add "or equal to." Refer to FSAR Table 4.4-1 (Rev. 0).

RSB Response

The applicant's proposed change is acceptable.

NMPC Comment

29. Page 4-11 and the fifth paragraph. The NRC has referenced Hatch. Nine Mile 2 FSAR table references Nine Mile 2, LaSalle, and WPPS2 under Table 4.4-1 (Rev. 0). We do not reference Hatch.

RSB Response

The "Hatch" reference should be kept even though the FSAR Table does not include Hatch. The staff used "Hatch" for comparison with NMP-2.

NMPC Comment

34. Page 5-17, second paragraph, third line indicates that the RCIC is required to maintain the reactor in standby conditions. FSAR page 5.4-29 (AMD 24) says hot standby.

RSB Response

"Hot standby" may be used for more clarity.

NMPC Comment

35. Page 5-25 provides information from several BWRs (Table 5.1 "safety/relief valve comparison"). This information cannot be verified within the Nine Mile 2 FSAR.

RSB Response

This information was taken from the various plants FSARs for comparison purposes. It should remain unchanged in the SER.

NMPC Comment

53. SER pg. 6-32, middle of first paragraph - It is just cooled by the service water system, not the RHR service water system. Reference FSAR page 6.3-3 Item (6) (Rev. 0).

RSB Response

"RHR service water system" may be changed to "service water system" to agree with NMP-2 plant specific terminology.

NMPC Comment

54. SER pg. 6-33, last paragraph, first sentence - It says"...the (ADS) can be used to depressurize the system..." System is clarified to "reactor or primary system." Ref. FSAR Pg. 9-3-10 (AMD 24).

RSB Response

"Reactor or primary system" may be used instead of "system" for more clarity.

NMPC Comments

55. Page 6-33, third paragraph discusses the high pressure connection of the differential pressure transmitter. This information was changed in Amendment 26. Further, we suggest the wording change to read as follows: "To ensure an interlock at all times for both automatic and manual valve actuation, the high pressure connection of each differential pressure transmitter directly senses reactor vessel pressure with a permissive setpoint of approximately 88 psid (LPCS) and 130 psid (LPCI)." Ref. FSAR Q&R F421.39 (7.6) (AMD 26). The last paragraph, second sentence indicates that in accident conditions, "the air supply to the valves of the ADS system is provided by seismically qualified accumulators... Change "air" to "nitrogen." Further, "bottled air supply" should be changed to "seismically qualified accumulators inside the secondary containment."

Refer to pages 9.3-10 (AMD 24) and 9.3-11 (AMD23) and Table 9.3-1e (AMD 26). Also, change "nitrogen bottles outside of containment" to "2 nitrogen tanks" are valved in upon receipt of a low pressure.

56. Page 6-34, first paragraph, second line - change "air to "nitrogen." After that sentence, add "In addition, nitrogen bottles located outdoors can be lined up to supply extended long-term N_2 storage to the system." Ref. FSAR 9.3-10 (AMD 24) and 9.3-11 (AMD 23).

RSB Response

The changes are acceptable.

NMPC Comment

131. Section 12 of the SER, page 12-1-SER references Rev. 3 of Reg. guide 8.8 FSAR Table 1.8-2 (AMD 17) invokes Rev. 4 of the Reg. guide.

RSB Response

In Section 12 of the SER all references to Reg. guide 8.8 Revision 3 are correct since in our evaluation we compared the applicant's FSAR against Revision 3. Please note that Revision 4 has not yet been issued in its final form.

NMPC Comment

132. SER page 12-7, Section 12.3.4.1 indicates 58 area monitors. FSAR Table 12.3-1 (AMD 24) shows 60 area radiation monitors.

RSB Response

As its heading states, Table 12.3-1 (AMD 24) represents "Area Radiation Monitor Locations." There are 58 locations at NMP-2 which are monitored. There are two high range area monitors at each of the four locations in the drywell to cover the full desired range of $1\text{-}10^7$ R/hr. (2 RMS*RE1A(-G); 2 RMS*RE1B(-Y); 2 RMS*RE1C(-G); and 2 RMS*REID(-Y). The sentence in the SER should be revised to read: "To meet these objectives, the applicant plans to monitor 58 plant locations where personnel may be present and where radiation levels could become significant.

NMPC Comment

133. Page 12-9 of the SER, first sentence indicates 848 person rem, while FSAR page 12.4-1 (AMD 17) and Table 12.4-12 (AMD 15) indicate 948 person rem.

RSB Response

The first sentence (on page 12-9) which states "Currently, operating BWR's average 848 person-rems per unit annually, with particular plants experiencing an average lifetime annual dose as high as 1850 person-rem." The 848 person-rem dose is an NRC computed value based on average reported annual plant personnel exposures at the time of writing the SER. It is not based on the NMP-2 FSAR.

NMPC Comment

134. Page 12-1, first paragraph, last line under Section 12.5-2 - The list of calibration facilities - add "at Nine Mile Point Unit 1" after "are available."

RSB Response

First paragraph on page 12-1 has only one sentence and has nothing in common with Section 12.5-2 nor a list of calibration facilities. In reference to Section 12.5.2, Equipment, Instrumentation, and Facilities, we are aware of the fact that the calibration facilities are located at nearby NMP-1 and will be used jointly for both Unit 1 and Unit 2.

NMPC Comment

135. SER pag. 12-11, Sec. 12.5.3, first sentence - add in after "assigned" "film badges or." Reference FSAR 12.5-15 (AMD 9), Section 12.5.3.3.7.

RSB Response

FSAR, Section 15.5.3.3.7, first sentence states that: "Plant employees, contractors, and visitors are required to wear film badge, a TLD, and a personal dosimeter when in the restricted area, in accordance with 10 CFR 20." Therefore, based on the FSAR, all three are required; a film badge is not a substitute for the other two personal monitors.

NMPC Comment

136. SER page 12-11 states that there are portable air samplers. However, page 1.10-28 (Rev. 0) of the FSAR indicates that there are portable, semi-portable or fixed air samplers used for this purpose. The SER indicates that silver zeolight is used. The FSAR indicates that a charcoal filter or silver zeolight is used. The SER says if entrapped, noble gases ... air sample filters ... The FSAR says, "prior to analysis, filters will be purged. This is unnecessary for silver zeolight."

RSB Response

The use of charcoal or silver zeolite filter cartridges for air sampling is permitted. The charcoal cartridges should be purged with clean air or nitrogen prior to analysis. In most cases silver zeolite cartridges do not require purging. Therefore, at the beginning of accident, or when there is need for quick results, the use of silver zeolite cartridges is preferable. This section responds to the compliance with NUREG-0737 (Item III.D.3.3) which is applicable to accident conditions and which requires portable air monitors, using sample media that will collect iodine selectively over xenon. NMPC is at the present time in compliance with NUREG-0737 (Item III.D.3.3). While we agree with the applicant's comments we see no need for a change to the SER.

NMPC Comment

141. SER pg. 15-3, second sentence - The safety limit should be 1.07 for single loop operation and 1.06 for double loop operation. See FSAR Appendix 15B, pg. 15B.3-5 (AMD 26) and Tech. Spec. pg 2-1, Item #2.1.2.

RSB Response

The change is acceptable.

144. Page 15-18 of the SER, last paragraph, second line - Change the words "the air supply" to "the nitrogen supply." Refer to previous comment item 99.

RSB Response

The change is acceptable. See item #56 response.

NMPC Comment

145. Page 15-20, first paragraph, sixth line - It says at this point the main steam line will be isolated automatically and the high pressure core spray system and RCIC system will be automatically initiated. Remove the words " the main steam line will be isolated automatically and." Refer to FSAR page 5.4-17 (AMD 6).

Third paragraph, the seventh and eighth lines indicate ADS will occur on high drywell pressure. Remove the words "high drywell pressure" and refer to FSAR page 7.3-5 (AMD 23).

The last sentence indicates that there is a 120 second timer in that same paragraph. Change 120 to 105 second. Change four signals on that same line to three. Refer to comments item 64.

RSB Response

The MSIVs are closed on Level 1 and not on Level 2. Hence the NMPC comment is valid. The ADS Logic was changed by deleting drywell high pressure to meet action plan Item II.K.3.18. The NMPC comment is valid. The ADS timer setting is 105 secs. Hence the NMPC comment is valid.

NMPC Comment

146. Page 15-23, first paragraph, sixth line indicates that intertie between service water system and reactor building closed loop cooling system. This statement is no longer true. Refer to pages 1.10-95 (AMD 23) and 1.10-96 (Rev. 0). (Ref: II.K.3.25).

RSB Response

The BWR Owner's Group tests performed for Bingham and Byron Jackson pumps have indicated that the seal leakage rates are acceptable following loss of cooling to the seals. NMPC should confirm that test results are representative and bounding for NMP-2 recirculation pumps.