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

SEP 2 1986

Docket No. 50-410

NOTE TO: Jim McKnight, Document Control

FROM: Mary Haughey, Project Manager for
Nine Mile Point, Unit 2
BWR Project Directorate No. 3
Division of BWR Licensing

SUBJECT: DRAFT INFORMATION PROVIDED TO NIAGARA MOHAWK POWER CORPORATION ON NINE MILE POINT, UNIT 2

The enclosed information was provided to Niagara Mohawk on August 30, 1986 to assist them in responding to NRC concerns on Nine Mile Point, Unit 2.

By copy of this note the enclosed information should be placed in the PDR and the LPDR.

Mary F. Haughey

Mary Haughey, Project Manager
BWR Project Directorate No. 3
Division of BWR Licensing

cc: PDR
LPDR

Noted: E. Adensam
E. Adensam

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STAFF RESPONSE TO NIAGARA MOHAWK POWER CORPORATION

COMMENTS ON THE NINE MILE POINT UNIT 2 SER AND SUPPLEMENTS 1 & 2

SECTION I SER COMMENTS

1. In our SER we stated that there are no non-seismic or non-tornado missile protected Category I vessels, pipes, or tanks located outside of plant buildings. Hence, since the seismic Category I water retaining components are limited to areas within plant buildings, their failure will not lead to external flooding of safety related structures or components.

   The applicant has performed an analysis of the potential for causing external flooding due to failures of non-seismic Category I or non-tornado missile protected water retaining components. The results of this analysis indicate that safety related components or structures will not be adversely affected by external flooding due to the failure of non-seismic Category I or non-tornado missile protected water retaining components.

   In view of the above considerations, we conclude that the information contained in our SER is accurate, but confusing, and [redacted] in the SER [redacted] will be revised.

2. & 33. The staff's SER states that the "unidentified leakage from the Reactor Coolant Pressure Boundary (RCPB) is detected by high pressure and temperature within the primary containment, drywell equipment and floor drainage sump level, gaseous radiation level in primary containment, and airborne particulate radioactivity monitoring. These leakage-detection systems are seismic Category I and are designed to be capable of performing their function following an SSE." As stated in Amendment 5 to the FSAR, all leakage detection systems are designed to be capable of performing their functions following an seismic events which do not require a plant shutdown; i.e., at or about the severity of an operational basis earthquake. As identified in FSAR Amendment 19, the drywell equipment drain tank collects piped drainage from the pump seal leakoff and the reactor vessel head flange vent drain. Therefore, the drywell equipment drain tank collects only identified leakage. The unidentified leakage is to be monitored, as specified in the FSAR Amendment 5, by the floor drainage sump, the airborne particulate radioactivity monitoring system, and the gaseous radioactivity monitoring system. As secondary monitoring systems, the containment atmosphere temperature and pressure monitors are to detect gross leakage. FSAR Table 3.2-1 identifies the primary containment radiation monitors (containment monitoring system) as the seismic Category I, Class 1E powered RCPB leakage detection systems. The primary containment radiation monitors, as discussed in FSAR Section 12.3 and Table 12.3-2, are the airborne particulate radioactivity monitors and the gaseous radioactivity monitors. Having these monitors as seismic Category I, Class 1E powered, meets the guidelines of Regulatory Guide 1.45, Position C.6.

(Section II)

The drywell equipment and floor drain tanks level instrumentation and the gaseous radioactivity and the airborne particulate radioactivity monitoring systems have the accuracy and the sensitivity in accordance with the guidelines of Regulatory Guide 1.45. The sensitivity and accuracy of these monitoring systems are specified in FSAR Table 5.2-8. On the basis of the conformance of these systems to the Regulatory Guide 1.45 in terms of accuracy and sensitivity, the RCPB leakage detection systems meets the guidelines of Position C.5 of Regulatory Guide 1.45.

The above material will be included in an SER supplement.

[redacted]

4. Acceptable for clarification. The SER will be revised. [redacted]

5. Acceptable for clarification. The SER will be revised. [redacted]

8. According to FSAR Fig. 9.2-10, the top of the highest intake structure, not including the manhole cover, is at elevation 232.5 ft. Lake Survey Datum of 1935. The normal lake level is at elevation 246 ft. Hence, there is approximately 12 feet of water between normal lake level and the top of the intake structures. The SER is correct as written.

10. Acceptable. Based on up-to-date information in FSAR Amendment No. 25: [redacted] The SER will be revised.

11. Rejected. Table 11-4 on SER page 11-16 is the staff's calculated values (GALE CODE) and may not be consistent with the applicant's calculated values, and does not alter the SER conclusion.

SECTION II SER COMMENTS

3. & 8. Differences in X/Q values reflect data and model assumptions used by the staff in the SER and in the FSAR by the licensee. SER is acceptable as written.

6. Discussion of extremes of temperature and precipitations normals is subject to revision periodically with the collection of more data. The general discussion in section 2.3.1 of the SER provides an overview of meteorological conditions that may be observed in the region containing the plant. SER is acceptable as written.

7. Discussion of air pollution in the region serves to describe the regional atmospheric conditions that exist and can influence the dispersion of gaseous effluents from the plant. SER is acceptable as written.

8. See response to comment 3 response above. The SER will be revised.

9a. Acceptable editorial change. [redacted]

9b. The correction referred to in the FSAR is a correction for Lake Survey Datum of 1935 as is stated. There is a slight difference between MSL (National Geodetic Vertical Datum of 1929) which the SER refers to and Lake Survey Datum at Oswego, N.Y. The SER is acceptable as written.

10. This change has been reflected in a supplement to the SER.

11. It is not clear as to exactly what Niagara Mohawk ~~the applicant~~ believes is in error in the staff's SER Section 2.4.11 relating to cooling water. Any suggested rewording by the applicant should, as a minimum, address every issue addressed by the staff in the paragraph(s) to be replaced. In this case these issues include:

    (1) total average withdrawal,
    (2) fish diversion withdrawal,
    (3) blowdown and other discharges, and
    (4) minimum operating water level.

    Additional information is needed from applicant before any changes can be agreed upon, and any potential changes in staff conclusions should be resolved prior to initial criticality.

11a. Acceptable minor change. [redacted] The SER will be revised.

11b. Acceptable minor change. [redacted] The SER will be revised.

11c. Acceptable minor change. [redacted] The SER will be revised.

12. The information contained in the NMP-2 SER relative to site stratigraphy was obtained from geologic cross sections, bedrock elevation maps and other site specific information contained in FSAR Section 2.4 and 2.5. The FSAR sections referred to in the applicant's comment refer to average properties of the overburden and rock in the site area. Therefore, there is no contradiction between the FSAR and the SER in regard to this issue. The SER is correct as written.

18. Section 9.5.4.1 of the SER identified the need for the applicant to provide additional information concerning the details of the 1-inch vent line between the diesel fuel storage tank and the day tank. This information was provided by the applicant in Amendment 20 to the FSAR. As documented in Supplemental SER number 2, this information was reviewed and found acceptable in that there is an acceptable means to vent and fuel oil storage tank in the event that the normal vent line is damaged by a tornado generated missile. Since the facilities identified in the alternative method are protected from tornado generated missiles, Section 3.5.2 of the SER is correct in stating that "All other safety-related systems and components and stored fuel are located within tornado-generated-missile-protected structures or are provided with barriers against tornado-generated missiles." The SER is correct as written.

33. See comment 2

37. SER is correct as written since Amendment 25 was issued after SER was published. [redacted] Additional changes to Table 6.1-3 on unqualified coatings inside containment were evaluated in SSER-#1. A future supplement of the SER will address the more current FSAR revisions in this area.

38. Acceptable for clarification. [redacted] The SER will be revised.

39. Acceptable for clarification. [redacted] The SER will be revised

40. Acceptable for clarification. [redacted] This change was made after SER was issued. The SER will be revised.

41. Acceptable for clarification. [redacted] This change was made after SER was issued The SER will be revised.

42. Acceptable for clarification. [redacted] This change was made after SER was issued. The SER will be revised.

43. Acceptable - editorial change. [redacted] The SER will be revised.

44. Acceptable for clarification. [redacted] This change was made after SER was issued. The SER will be revised.

45. Acceptable for clarification. [redacted] Change was made after SER was issued. The SER will be revised.

46. Changes were made in SSER-2 except for reactor building inleakage which was increased from 3160 ft^3/min to 3190 ft^3/min. This increase was due to an increase in reactor building volume from 4,547,204 ft^3 to 4,593,600 ft^3 to reflect the as-built plant configuration. Therefore, it is acceptable. The increased 3190 ft^3/min inleakage is included in the final Technical Specification. [redacted] The SER will be revised.

47. Acceptable; see comment 46. [redacted] The SER will be revised.

48. Acceptable editorial comment. [redacted] The SER will be revised.

49. Acceptable for clarification. [redacted] The SER will be revised.

50. Acceptable for clarification. [redacted] The SER will be revised.

51. SSER-3 addresses this comment except for the inclusion of the main steam system as conforming to the 10 CFR 50, Appendix J, Type A test criteria. This is acceptable since the main steam lines are flooded during the time of Type A testing and cannot be vented to the primary containment. [redacted] The SER will be revised.

52. Acceptable editorial change. [redacted] The SER will be revised

57. Acceptable for clarification. [redacted] The SER will be revised.

88. The applicant's reference to FSAR page 9.1-15a on high energy pipe breaks does not support the requested word changing. Furthermore, there is no wording or the results of any analysis which could be found in Section 9.1.3 of the FSAR which could support the requested word change. Based on the lack of support information, we conclude that the SER, as written, may be correct and should remain unchanged at this time. This is an open item [redacted] since the differences in staff and applicants conclusions involve an important safety issue.

89. The SER was prepared prior to receipt of Amendment 19 to the FSAR. In Amendment 19 the applicant changed the results of their analysis of the heat rejection capability of the spent fuel pool cooling system. The SER cannot be changed without the applicant providing a complete refueling schedule and data for the staff to perform a revised evaluation. If the numbers specified in the SER do not pose any undue burden to the applicant, the most expedient solution is for the applicant to withdraw the comment. This is an open item [redacted]

90. The SER states: "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." The applicant has requested that this sentence end with"... below the normal water level of the fuel." If our SER is not correct, then the applicant does not meet the requirements of General Design Criterion 44, "Cooling Water" and this, then, is an open item. The applicant's reference to FSAR Page 9.1-7 does not support the requested change. Furthermore, the sentence that was proposed makes little or no sense. Based on the above, we conclude that the SER, as written, should remain unchanged, and the applicant should confirm that they do not meet the requirements of General Design Criterion 44. This is an open item [redacted]

91. Acceptable minor detail changes applicant made after SER was published. [redacted] The SER will be revised.

94a. Acceptable. [redacted] The SER will be revised.

94b. Acceptable. [redacted] The SER will be revised.

95. Acceptable. [redacted] The SER will be revised.

96. The safety-related portions of the reactor building closed-loop cooling water (RBCLCW) system are quality class B. The non-safety-related portions are not specifically addressed in the SER. Only the safety-related portions are required to met the requirements of General Design Criterion 2 and the guidelines on Regulatory Guide 1.29. Thus, we conclude that the SER, as written, is correct and should not be revised.

97. Acceptable. [redacted] The SER will be revised.

98. Acceptable. [redacted] The SER will be revised.

99. The applicant proposed an acceptable minor change that does not affect meeting the guidance and requirements for the Process Sampling System. [redacted] The SER will be revised.

100. Acceptable for clarification. [redacted] The SER will be revised.

101. The applicant's comment to revise the wording from "nonseismic Category I" to simply "nonseismic" is a meaningless comment. From the Staff's point of view, either the component is "seismic Category I" or it is "nonseismic Category I". There are no categories of "seismic" and "nonseismic". The SER, as written, is correct and should not be modified.

106. This comment is acceptable. The SER [redacted] will be revised.

107. This comment is rejected on the basis that the staff could not find the commitment in the reference given. This is an open item [redacted]

108. This comment is acceptable. [redacted] The SER will be revised.

109. This comment is acceptable in principle except the SER change will drop any reference to illumination level and state instead that the operator must have sufficient light to see, to perform the necessary emergency functions. [redacted]

110. This comment is acceptable. The proper references are FSAR pages 9.2-28 & 29, and figure 1.2-29. [redacted] The SER will be revised.

111. This comment is acceptable. [redacted] The SER will be revised.

114. The applicant requested that our SER be revised to reflect a lower storage capacity for the seven day fuel oil storage tanks. The SER states that the capacity of these tanks for diesel generators I & II are 53,150 and 46,850 gallons, respectively. The applicant desires these values to be revised to 52,664 and 36,173 gallons, respectively. Based on the information provided by the applicant in Amendment 25 to the FSAR, the required capacity for the seven day storage tank would be 68,712 and 47,376 gallons, respectively. These figures are derived from the one hour fuel consumptions provided in the FSAR. Based on the manufactures data for Division III diesel generator, the seven day storage tank would need a capacity of 45,360 gallons. Furthermore, the fuel consumption rate for the Division III diesel generator stated in the FSAR, as amended by Amendment 25, is only 75% of the fuel consupmtion rate specified by the manufacturer. The applicant must provide justification for not using the manufacturer's fuel consumption rates, for requesting approval for storage of less than the currently acceptable amounts of fuel oil, and for reconciliation of the specified fuel consumption rates specified in Amendment 25 and the one hour fuel operating consumption. We note that all of the above information is based on the same assumptions as was the applicant's analysis and specified in the FSAR. Based on the inconsistences and the unsupportable assertions made by the applicant, we conclude that the SER, as written, may be correct and must not be changed without adequate justification and information from the applicant. This is an open item [redacted]

118. Acceptable. [redacted] The SER will be revised.

122. Acceptable. This change has already been incorporated in SSER No. 3 issued in July 1986.

123a. Rejected. Since the staff's evaluation was based on the use of all process equipment available at NMP-2 Liquid Radwaste System. The applicant may bypass certain equipment if radioactivity and/or impurities in the streams are sufficiently low to meet Appendix I "ALARA" criteria and Technical Specification. The SER will be [redacted] modified to clarify the need to operate the radwaste system to meet the ALARA intent of Appendix I to 10 CFR 50.

123b. The staff's system description (not evaluation) includes only normal process pathways (not all possible and conceivable pathways). No change in the SER is considered necessary.

123c, d&e The staff's numbers are more conservative based on the applicant's original data and information provided to NRC. No SER change required.

124. Acceptable. Revised SER page 11-5 is attached.

125. Partly acceptable. Based on [redacted] information through FSAR Amendment No. 26. [redacted] The reference to 49 CFR 170 is correct.

126. Acceptable. [redacted] The SER will be revised

127. Accepted for clarification. [redacted] The SER will be revised.

128. Rejected. Wordings are consistent with NUREG-0737, Item II.F.1, Attachment 1

129. Rejected. Table 11-2 on SER page 11-4 is the staff's independently calculated values and need not be consistent with applicant's calculated values.

The SER will be revised to reflect 11,000 curies instead of 6,000 curies of activity for the annual production of wet solid wastes. The minimum storage capacity will be revised from 2 months to 3 months.

130. Accepted. Based on [redacted] information through FSAR Amendment No. 23. [redacted] The SER will be revised.

131. 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 Revisions 3. Please note that Revision 4 has not yet been issued in its final form.

132. 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 1-10 R/hr. (2 RMS*RE1A(-G); 2 RMS*RE1B(-Y); 2 RMS*RE1C(-G); and 2 RMS*REID(-Y). The sentence in the SER [redacted] be revised to indicate [redacted] 58 locations. R will

133. 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, and no SER change is required.

134. 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, on page 12-10, which we assumed was the intended reference, 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.

135. FSAR, Section 12.5.3.3.7, 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. The applicant apparently understands differently, and the issue [redacted] is an open item

136. Applicant's comments is noted, [redacted] The SER will be revised.

143. Acceptable. [redacted] The SER will be revised

148. Acceptable. [redacted] The SER will be revised

149. Acceptable. [redacted] The SER will be revised.