



Wisconsin  
Electric  
POWER COMPANY

231 W. Michigan, P.O. Box 2046, Milwaukee, WI 53201

(414) 221-2345

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Document Control Desk  
U.S. NUCLEAR REGULATORY COMMISSION  
Mail Station P1-137  
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10 CFR 50.63

Gentlemen:

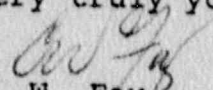
DOCKET NOS. 50-266 AND 50-301  
10 CFR 50.63, TAC. NOS. 68586 AND 68587  
LOSS OF ALL ALTERNATING CURRENT POWER  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

On October 9, 1990, Wisconsin Electric received the Safety Evaluation by the Nuclear Regulatory Commission Office of Nuclear Reactor Regulation for the Point Beach Response to the Station Blackout Rule, 10 CFR 50.63. The Safety Evaluation was transmitted to Wisconsin Electric by a letter from Robert B. Samworth of the NRC to C. W. Fay of Wisconsin Electric, dated October 3, 1990.

The October 3, 1990, letter concludes that the design and proposed method of dealing with a station blackout at the Point Beach Nuclear Plant is in conformance with the rule, 10 CFR 50.63. This finding is contingent upon Wisconsin Electric notifying the NRC that the recommendations in the Safety Evaluation will be implemented. The notification and schedule for implementation of these recommendations is provided in the attachment to this letter. Recommended clarifications of the Safety Evaluation Report and the Technical Evaluation Report are also provided in the attachment.

We would be pleased to answer any questions regarding this letter or the implementation of 10 CFR 50.63 requirements at the Point Beach Nuclear Plant.

Very truly yours,

  
C. W. Fay  
Vice President  
Nuclear Power

Copies to NRC Regional Administrator, Region III  
NRC Resident Inspector

Attachment

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**Wisconsin Electric Evaluation of the Safety Evaluation  
by the Office of Nuclear Reactor Regulation  
Related to Station Blackout  
Point Beach Nuclear Plant, Units 1 and 2**

Evaluation of NRC Recommendations:

**The Proposed AAC Power Source**

NRC Recommendation: The licensee should demonstrate using actual test data that the Gas Turbine Generator (GTG) can obtain and maintain a reliability of 0.95 or better. This demonstration should be completed within a reasonable time period (approximately 2 years). If the demonstration does not indicate an acceptable reliability of 0.95 or better, the licensee should propose an alternative or install another AAC source to meet the guidelines of RG 1.155 and NUMARC 87-00. (By letter dated August 3, 1990 WEPCO advised NRC that two additional EDGs would be installed. That letter did not indicate how the installation would relate to planning for station blackout.)

The licensee should also complete the test to show that the AAC source (GTG) can power the SBO loads within 1 hour after the onset of the SBO.

WEPCO Response: Wisconsin Electric will demonstrate the achievability of 95% reliability on the GTG, using actual test data, within 2 years. In a letter dated June 29, 1990, Wisconsin Electric provided information to the NRC regarding the status of testing of the GTG as an AAC power for Point Beach. Subsequent testing has shown that the high temperature trip of the auxiliary power diesel generator for the GTG can still occur if outside temperatures are higher than the temperatures experienced during the June 15, 1990 test. The outside air temperature at Point Beach during the June 15 test was approximately 55°F.

The manufacturer of the auxiliary power diesel generator was consulted. The manufacturer recommended replacement of the high temperature trip circuitry. This modification is expected to be complete by May 1991. The successful resolution of the high temperature trip problem by this modification will not be completely verified until an eight hour duration test is performed with warmer outside air temperatures (i.e. during the summer of 1991). Blackout start testing of the GTG is continuing on a monthly basis to establish the data to determine its reliability in this mode.

When blackout start tests are performed on the GTG, it is normally started and loaded within 1 hour. Wisconsin Electric believes that this adequately shows that the AAC source (GTG) can power SBO loads within 1 hour after the onset of the SBO.

## **Condensate Inventory for Decay Heat Removal**

NRC Recommendation: The licensee should revise the TS to specify a minimum condensate tank inventory of 13,000 gallons per unit to provide assurance that adequate water is available to cope with an SBO for the required 1 hour duration.

WEPCO Response: The SER states that this recommendation is based on the reasons discussed in the SAIC TER that is attached to the SER. The SAIC TER states:

If the NUMARC coping calculation of Section 7.2.1 (8) were applied directly, the required condensate inventory for one hour would be just under 13,000 gallons. If 13,000 gallons were available in the CST, the SG water inventory would provide the margin necessary to shift suction during the recovery from SBO.

The method for determining required condensate inventory provided in NUMARC 87-00, Section 7.2.1, is based on a coping duration of four (4) hours. This methodology is not directly applicable to Point Beach because the AAC power source, which is available within one hour, will be used to provide power to the Service Water pumps. Service water can be used as a suction source for the Auxiliary Feedwater system.

Due to the inapplicability of the NUMARC methodology, a plant specific calculation was performed. The calculation assumed that only 10,000 gallons of water was available through the Auxiliary Feedwater system. Ten thousand (10,000) gallons is the Technical Specification minimum amount of CST inventory per operating unit allowed. The plant specific calculation shows that the minimum CST inventory along with the initial steam generator liquid inventory is adequate to maintain the decay heat removal capability of the steam generators for at least one hour of station blackout.

Even though 10,000 gallons has been determined to be adequate, Wisconsin Electric agrees that additional inventory in the condensate storage tanks would provide more time to shift the suction of the Auxiliary Feedwater pumps to the backup source. Therefore, based on the judgement that the additional time would make SBO recovery easier, we will implement the recommended Technical Specification change. This change will be submitted for NRC approval by May 1991.

## **Class 1E Battery Capacity**

NRC Recommendation: The licensee should complete the battery capacity calculations in conformance with RG 1.155, Section 3.2, and include the calculations and results in the documentation package supporting the SBO analyses. The licensee should develop and implement any modifications that are required to assure

adequate battery capacity to power the needed equipment for an SBO event.

WEPCO Response: Battery capacity calculations are complete for all 4 station batteries. The documentation supporting the SBO analyses has been updated to include the most current calculations. Plant modifications are not required as a result of these calculations.

#### **The Effects of the Loss of Ventilation**

NRC Recommendation: 1) The licensee should document additional information to demonstrate the acceptability of the methodology, assumptions, adjacent room effect, and initial conditions used in the heat-up calculations. 2) The licensee also should confirm that the assumed initial room temperatures for the control and computer rooms are maximum allowable values and not just typical values, and if necessary, the room heat-up calculations for these two rooms should be reanalyzed based on the higher initial temperature. 3) The licensee should document additional justification as to why it is not necessary to open cabinet doors in the computer room, and the basis used for determining the number and location of ceiling tiles that were removed in the control and computer rooms. 4) The licensee should describe the controls that are to be used to assure that the ceiling tiles are not replaced or reconfigured in the future. The licensee should maintain the additional information and any analyses performed as a result of these recommendations in the documentation supporting the SBO submittal.

WEPCO Response: These recommendations for verifying the loss of ventilation analyses will be implemented by May 1991. If additional analyses are required, they will be complete by November 1991.

#### **Procedures and Training**

NRC Recommendation: The EOPs should be reviewed and modified accordingly if necessary to account for any changes made to the EDG/GTG configuration or the associated 13.8 kV system, and appropriate training should be implemented to ensure an effective response to the SBO.

WEPCO Response: Modifications to Point Beach are controlled by the use of Nuclear Power Department procedures. These procedures require the appropriate procedure reviews and updates and appropriate operator training as part of the modification process.

#### **Proposed Modification**

NRC Recommendation: Installation of additional EDG capacity. The SBO coping duration and evaluation would have to be re-evaluated subsequent to the licensee providing information on the installation.

WEPCO Response: The SBO coping evaluations and analyses will be amended for these changes in plant configuration at Point Beach.

### **Quality Assurance**

NRC SER Statement on Quality Assurance: The licensee has committed to incorporate equipment used to cope with an SBO and not covered by current QA programs into a QA program that meets the guidance of RG 1.155, Appendix A.

WEPCO Response: QA requirements for SBO equipment will be implemented by November 1991.

### **EDG Reliability Program**

NRC SER Statement on EDG Reliability Program: The licensee's submittal on SBO did not specifically address the commitment to implement an EDG reliability program to conform to the guidance of RG 1.155, Position 1.2. However, during the site audit review, the licensee stated that their reliability program would meet these guidelines. The staff finds this to be an acceptable commitment toward meeting the requirements of the SBO rule.

WEPCO Response: An EDG reliability program that conforms to the guidance of RG 1.155, Position 1.2, will be established for Point Beach by November 1991.

### **SER and TER Clarifications**

#### NRC SER

- Page 5 First paragraph: "...water to the section of the auxiliary feedwater pumps,..." should state "...water to the suction of the auxiliary feedwater pumps,..."
- Page 5 Section 2.3.4: "...smallest vital switchgear rooms." should state "...smallest instrument bus inverter rooms."

#### SAIC TER

- Page 21 Section 5. First paragraph: Valve 755B should be 754B.
- Page 22 First paragraph: "...consideration in accordance with RG 1.1.55, Section..." should state "...consideration in accordance with RG 1.155, Section..."
- Page 22 Last paragraph: The maximum allowable RCS leakage is 10 gpm not 25 gpm. Reference TS 15.3.1.D.2.
- Page 24 The table of equipment: P-195 should be P-105.