UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

DCS/PCB

AUG 2 0 1992

Docket No. 50-266

Wisconsin Electric Power Company
ATTN: Mr. Robert E. Link
Vice President
Nuclear Power Department
231 West Michigan Street, Room P379
Milwaukee, Wisconsin 53201

Dear Mr. Link:

This confirms the granting of a Temporary Waiver of Compliance (TWOC) for Point Beach Nuclear Plant, Unit 1, from the provisions of Technical Specification Section 15.3.0, "Limiting Conditions for Operation, General Considerations", and Section 15.3.5, "Instrumentation System", for a duration of up to 72 hours. Oral approval for this waiver was provided at 6:05 pm on August 18, 1992, during a telephone conference between our respective staffs and members of NRR. On August 19, 1992, we received your letter requesting the TWOC. A copy of your letter is inclosed.

Point Beach, Unit 1, is currently in Mode 1 at 100% power. Technical Specifications Section 15.3.5 requires that during plant operations, the complete instrumentation system will normally be operable and in service. This section also delineates minimum operable channel requirements and minimum degree of redundancy required for these instrumentation systems. Technical Specifications Section 15.3.0, specifies that if the above conditions cannot be met for a critical unit the affected unit shall be placed in the hot shutdown condition within three hours.

On August 18, 1992, you orally informed the NRC that during system and component reviews of the Auxiliary Feedwater System, the seismic mounting for instrumentation cabinets in the control room for Unit 1 was determined to be inadequate and could fail during a design basis seismic event. On the basis of this finding, the Reactor Protection System, Engineered Safeguards System and Process Instrumentation System in the affected cabinets were declared inoperable and Technical Specifications 15.3.0 was invoked at 5:05 pm on August 18, 1992.

You requested an additional 72 hours before the unit would be required to comply with the Technical Specification requirement to be placed in a hot shutdown condition. This waiver was requested to avoid an unnecessary thermal cycle on the unit which would result during a unit shutdown.

I understand that during the effective period of time that this Waiver of Compliance is in effect, Point Beach Nuclear Power Plant will take the following compensatory and corrective actions:

IE01
1/1

a. To meet design basis requirements, a modification will be performed on the affected instrumentation system cabinets to seismically anchor them to the control room floor.

b. Systems or associated components in the Reactor Protection and Engineered Safeguards Feature Systems will not be removed from service until the instrumentation cabinets are restored to their design basis conditions.

c. Work which could affect the operability of the alternate shutdown system has been prohibited for the duration of the waiver.

d. Your System Control Center has been informed to minimize requests for changes in loading of the Point Beach Plant.

e. If repairs to the instrumentation cabinets cannot be completed within the 72-hour period and an additional waiver is not authorized by me, Unit 1 will comply with the Technical Specification requirements.

We have evaluated the information you provided orally and your subsequent written request and supporting documentation and determined that they adequately support your request for a temporary waiver of compliance. Based on the low probability of a seismic event of sufficient magnitude to affect the cabinets occurring during the waiver period and the capability to place and maintain the unit in a safe condition should the instrumentation cabinets fail, with concurrence from NRR, the Deputy Regional Administrator, in my absence, granted the requested relief on August 18, 1992, at 6:05 pm. I understand that this waiver of compliance will be terminated prior to its expiration date if repairs to the instrumentation cabinets are completed and the systems declared operable.

Sincerely,

A. Bert Davis
Regional Administrator

Enclosure: As Stated

See Attached Distribution

AUG 2 0 1992

Distribution

cc w/enclosure:
G. J. Maxfield, Plant Manager
DCD/DCB (RIDS)
OC/LFDCB
Resident Inspector, RIII
Virgil Kanable, Chief
Boiler Section
Charles Thompson, Chairman
Wisconsin Public Service
Commission
Robert M. Thompson, Administrator
WI Div of Emergency Govt.
Anthony Mendiola, Technical
Assistant, DRP, I/II, NRR
James G. Partlow, Associate Director
for Projects, NRR
B. A. Boger, NRR
T. E. Murley, NRR
J. N. Hannon, NRR
R. L. Wharton, NRR
J. Lieberman, OE
R. W. DeFayette, EIC. RIII
J. H. Sniezek, EDO

Wisconsin Electric POWER COMPANY

231 W. Michigan, P.O. Box 2046, Milwaukee, WI 53201 (414) 221-2345

VPNPD-92-286
NRC-92-095

August 19, 1992

Mr. A. Bert Davis, Regional Administrator
U. S. NUCLEAR REGULATORY COMMISSION
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Davis:

DOCKET 50-266
REQUEST FOR REGIONAL WAIVER OF COMPLIANCE
OPERABILITY OF REACTOR PROTECTION
AND ENGINEERED SAFEGUARDS INSTRUMENTATION
DURING A SEISMIC EVENT
POINT BEACH NUCLEAR PLANT, UNIT 1

The purpose of this letter is to document the basis for the request from Wisconsin Electric Power Company for a Regional Waiver of Compliance from the requirements in Point Beach Nuclear Plant Technical Specification Section 15.3.0, "Limiting Conditions For Operation, General Considerations," and Section 15.3.5, "Instrumentation System," for a duration of 72 hours. A 72-hour waiver will provide the time necessary to restore the instrumentation cabinets containing Reactor Protection System, Engineered Safeguards System, and process instrumentation for Point Beach Nuclear Plant, Unit 1, to their design basis for seismic events.

REQUIREMENT FOR WHICH THE WAIVER IS REQUESTED

PBNP Technical Specification Section 15.3.5 defines the operability requirements for Reactor Protection, Engineered Safeguards, and process instrumentation for the Point Beach Nuclear Plant units. This section defines minimum operable channels required and minimum degree of redundancy required for this instrumentation. These limits ensure that safety is not compromised by operation with certain instrumentation channels out of service. The specification outlines limiting conditions for operation necessary to preserve the effectiveness of the Reactor Protection System and Engineered Safeguards System when any one or more of the channels is out of service.

Specification 15.3.0, the general considerations for Technical Specification Section 15.3, "Limiting Conditions for Operation,"

requires an affected unit which is critical to be placed in the hot shutdown condition within three hours if the conditions prescribed by the Limiting Conditions for Operation (LCO) cannot be satisfied. Additionally, if the conditions which prompted the shutdown cannot be corrected and the LCO does not specify an additional time period, the unit shall be placed into the cold shutdown condition within 48 hours. The basis for these general considerations is to delineate action to be taken for circumstances not directly provided for in the action statements of the specific LCO, the occurrence of which would violate the intent of the specification.

On August 18, 1992, the seismic mounting of instrumentation cabinets in the control room for Unit 1 was determined to be inadequate, such that it would likely fail during a design basis seismic event. This condition necessitated declaring the Reactor Protection System, Engineered Safeguards System, and process instrumentation contained in the affected cabinets inoperable which invokes the requirements of Technical Specification Section 15.3.0. This requires placing Unit 1 in hot shutdown within three hours and in cold shutdown within the 48 hours if the condition cannot be corrected in the specified times.

CIRCUMSTANCES SURROUNDING THE SITUATION

During system and component reviews for upgrading of our Auxiliary Feedwater System to safety-related, the as-built base mountings of control room cabinets 1C-105 through 1C-135 were field reviewed using the Seismic Qualification User's Group (SQUG) Generic Implementation Procedure for Verification of Nuclear Plant Equipment and were determined to require evaluation for seismic adequacy. These cabinets contain Reactor Protection System, Engineered Safeguards System, and process instrumentation for Unit 1. The cabinets are arranged such that 1C-105 through 1C-114 form one continuous integral row of cabinets and cabinets 1C-115 through 1C-135 form a separate row. The cabinet rows are parallel to each other and are located on the Unit 1 (south) side of the control room. Adjacent cabinets are fastened together with bolting along the front and back vertical frame members. The base of each cabinet consists of a four-inch channel frame. Field review indicated the cabinets were anchored to the control room floor by friction clips positioned at several locations along the bottom of the cabinet channel frame. Each friction clip assembly consisted of 1/4 inch x 1-1/2 inch x 5-1/4 inch plate steel with a 3/8-inch expansion anchor bolt attached to the floor.

Following the field review, the as-built configuration of cabinet row 1C-105 through 1C-114 was analyzed to determine the seismic adequacy of the cabinet base mounting. This cabinet row was anchored using three friction clips on the north side of the base

and four clips on the south side. Our analysis was completed and verified on August 18, 1992 at 5:05 p.m. We determined the base mounting was not seismically adequate in that the friction clips could be overloaded due to a postulated safe-shutdown earthquake. Specifically, the plate steel clips were identified as the weak member and were loaded beyond their yield point by approximately a factor of three. We have considered performing a non-linear plastic analysis of the friction clips, but due to the magnitude of the loading, we have judged that this analysis would not verify seismic adequacy. Although we have not completed a specific analysis for the adjacent row of cabinets, 1C-115 through 1C-135, it is our judgment that this row of cabinets is in the same condition as the analyzed row due to similar mounting configurations.

We have field verified the Unit 2 instrumentation cabinet mountings on the north side of the control room and have determined that these cabinets have adequate mounting for seismic loading.

COMPENSATORY AND CORRECTIVE ACTIONS

We have taken, or will take, the following compensatory and corrective actions:

1. In order to complete a modification to the base mounting for cabinets 1C-105 through 1C-135 in as timely a manner as possible, engineering personnel were mobilized late yesterday afternoon. The engineering personnel have completed a design modification for adequate seismic anchorage of the cabinets. The design was completed this morning and involves securing the front and back cabinet base channels using 3 inch x 4 inch x 3/8 inch angle steel fastened to the outside of the base channels with 1/2 inch bolts and anchored to the floor with 5/8 inch x 7 inch concrete expansion anchors. Installation of the modification began this afternoon. Following installation of this modification, the cabinet mounting will meet design basis requirements and the instrumentation contained in the cabinets will be declared operable.

2. We will not remove any Reactor Protection System or Engineered Safeguards Feature systems or associated components from service until the instrumentation is restored to its design basis conditions. During our telephone conference on August 18, 1992, we informed you that one service water pump was out of service for maintenance. Subsequent to our telephone conference, at approximately 4:00 p.m. today, a second service water pump was removed from service due to a suspected electrical motor fault. Neither of these occurrences has any impact on the need for this waiver from our license conditions.

3. We have requested special consideration from our System Control Center to minimize requests for changes in loading of the Point Beach units.

4. Work on the alternate shutdown system, or any work which could affect the operability of the alternate shutdown system, has been prohibited for the duration of the waiver.

SAFETY SIGNIFICANCE AND POTENTIAL CONSEQUENCES

A seismic event is not considered an initiator for any design basis accident analysis presented in the PBNP Final Safety Analysis Report, Chapter 14, "Safety Analyses." The Reactor Protection and Engineered Safeguards instrumentation and equipment remain operable for all conditions other than a seismic event.

The design basis safe shutdown earthquake (SSE) for Point Beach assumes a horizontal ground acceleration of 0.12g. At the SSE acceleration, calculations show that some components of the cabinet mountings are overloaded by approximately a factor of three. Thus, in general, these components should withstand a horizontal ground acceleration on the order of one third the SSE level, or 0.04g. The annual mean probability of exceeding a peak ground acceleration of 0.04g at the Point Beach site is on the order of 1E-03 per year. This estimate is obtained from EPRI Report NP-6395-D, "Probabilistic Seismic Hazard Evaluations at Nuclear Plant Sites in the Central and Eastern United States: Resolution of the Charleston Earthquake Issue," dated April 1989. This report was developed by EPRI and the Seismicity Owners Group (SOG) using a seismic hazard methodology described in a generic topical report submitted to the NRC in July 1986 (Technical Report NP-4726-A, EPRI, July 1986).

On the basis of this annual seismic event frequency, we estimate that the probability of a seismic event equivalent to or exceeding one third of our SSE occurring during the requested duration of this waiver (72 hours) is approximately 8E-06. This represents an extremely small probability of these analog instrument cabinets and the contained instrumentation becoming inoperable due to a seismic event within the 72-hour time period.

As discussed with you during our telephone conference on August 18, given a failure of these cabinets and associated instrumentation to perform their safety functions, manual initiation of Reactor Protection System and Engineered Safeguards Features functions would remain available. Also, Point Beach has the capability to safely shut down the plant and maintain the plant in a safe shutdown condition using remote shutdown panels. This capability was installed for resolution of Appendix R safe shutdown requirements. Switches at the shutdown panels are used to isolate the instrument

indication at the panels from the control room instrumentation. Therefore, loss of the instrumentation in the control room will have no effect on our ability to place and maintain the plant in a safe shutdown condition.

JUSTIFICATION FOR THE DURATION OF THE WAIVER

The requested 72-hour waiver period will be sufficient to allow us to complete the design and installation of modifications to instrument cabinet supports, restoring their capability to withstand the design basis seismic event. This work is expected to take approximately 48 hours. However, 72 hours is requested to allow for any unanticipated delays in the design, procurement of materials, and installation process. If problems are encountered during the installation such that a unit trip or significant effect on unit operation is likely, the unit will be placed in hot shutdown prior to continuing with the installation.

Based on the low probability of a seismic event during the waiver period and the capability to place and maintain the plant in a safe condition following a failure of the instrument cabinets, we have concluded that the duration we have requested for this waiver of compliance is justified and appropriate.

SIGNIFICANT HAZARDS CONSIDERATION

We have evaluated the continued operation of Unit 1 with non-seismically qualified instrument cabinets containing Reactor Protection System and Engineered Safeguards System instrumentation for the 72 hours requested in this waiver, in accordance with the standards contained in 10 CFR 50.92, "Issuance of amendment," and have determined that the continued operation of Unit 1 during this time period does not result in a significant hazards consideration. Operation of a facility in accordance with a temporary waiver of compliance involves no significant hazards if it does not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or

2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or

3. Involve a significant reduction in a margin of safety.

The Reactor Protection System, Engineered Safeguards System, and process instrumentation in the affected instrument racks were declared inoperable due to the cabinets containing the instruments being inadequately mounted to withstand the SSE for PBNP. The instruments remain operable and functioning for all operating

conditions other than a seismic event. The PBNP design basis does not consider a seismic event an initiator of any of the design basis accidents in the PBNP Final Safety Analysis Report Chapter 14, "Safety Analyses." All reactor protection and engineered safeguards systems remain capable of performing their function as analyzed in the safety analyses. Therefore, under normal operating conditions, an increase in the probability or consequences of an accident previously evaluated will not occur, the possibility of a new or different kind of accident other than any accident previously evaluated is not created, and a reduction in margin of safety cannot occur.

PBNP is designed to continue operating or to be brought to a safe shutdown condition dependent on the magnitude of a seismic event. A seismic event will not result in the initiation of a separate design basis accident. If a seismic event should occur during the 72-hour period requested in this waiver, the operability of reactor protection and engineered safeguards equipment cannot be assured. However, indications and manual operations at alternate shutdown panels will be utilized to bring Unit 1 to a safe shutdown condition. Alternate shutdown panels are installed at locations remote from the control room with indications and controls for necessary systems and components to bring the unit to a safe shutdown condition. Manual switching provides remote indication at these panels and completely separates them from the control room instrumentation. Therefore, failure of the instrumentation in the control room cabinets will not affect the indication at the remote shutdown panels and will not prevent the remote and/or manual control of systems and components necessary for achieving and maintaining a safe shutdown condition. Thus, an increase in the probability or consequences of an accident previously evaluated will not occur, the possibility of a different kind of accident than any previously evaluated is not created, and the margin of safety is not reduced.

ENVIRONMENTAL CONSEQUENCES

Operation of Unit 1 under the conditions of this temporary waiver from our license requirements does not result in changes to the installation or use of the facilities or components as described in 10 CFR 20, "Standards For Protection Against Radiation." Increases or changes in the types of effluents that may be released off site will not occur, nor will there be an increase in individual or cumulative occupational radiation exposure. Operation of the unit during the requested waiver period results in no significant hazards. Therefore, this request satisfies the categorical exclusion requirements of 10 CFR 51.22 (c) (9). An environmental assessment or environmental impact statement is not required.

STATE NOTIFICATION

The appropriate staff member of the Public Service Commission of Wisconsin (PSCW) will be provided with a copy of this application in accordance with 10 CFR 50.91 (b).

SUMMARY OF EVALUATIONS AND COMMUNICATIONS

The PBNP Manager's Supervisory Staff (MSS) discussed this issue at approximately 2:00 p.m. on August 18, 1992, and concurred in the decision to request this waiver pending final review and verification of the calculation showing nonconformance of the instrument cabinets with their design basis. The MSS was informed of the review and verification of the calculation at approximately 5:05 p.m. on August 18, 1992. The MSS declared the instrumentation inoperable at that time.

An informational notification was made to the NRC Operations Duty Officer based on the preliminary calculations at 4:03 p.m. on August 18, 1992. Following declaring the instrumentation inoperable, a one-hour notification was made in accordance with 10 CFR 50.72 (b) (1) (i) (a), and completed at 5:57 p.m. An informational notification was also made to NRR and Region III staff at approximately 4:05 p.m. to discuss the discovered condition and likely need for a regional waiver from license requirements.

We will continue to conform to all other license requirements during the period of the authorized waiver. If repairs cannot be completed within the 72-hour period and an additional waiver is not authorized by your office, we will place Unit 1 in a hot shutdown condition within three hours and a cold shutdown condition within 48 hours.

We received verbal approval of this request for waiver from your offices during our telephone conference with Messrs. Edward Greenman, John Zwolinski, and other members of Region III and NRR staff at 6:05 p.m. on August 18, 1992. This approval was contingent upon the submittal of this request and completion of the compensatory and corrective actions described above.

Please contact us if you have any additional questions or require additional information concerning this request.

Singerely,

Bob Link
Vice President
Nuclear Power

Copies to NRC Document Control Desk
NRC Resident Inspector
Assistant Director for Reactor Projects, NRR