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VPNPD-90-168
NRC-90-136

April 10, 1990

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

Dear Mr. Davis:

DOCKET NOS. 50-266 AND 50-301
REQUEST FOR TEMPORARY WAIVER OF COMPLIANCE
DIESEL GENERATOR FUEL OIL SUPPLY
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

The purpose of this letter is to document the basis for the request from Wisconsin Electric Power Company for a seven day Temporary Waiver of Compliance of Technical Specification 15.3.7.A.1.e for the Point Beach Nuclear Plant.

1. Requirement for Which a Waiver is Requested

Specification 15.3.7.A.1.e states that "Under normal conditions, neither one nor both reactors shall be made critical unless the following conditions are met: A fuel supply of 11,000 gallons is available, and both diesel generators are operable." During power operation of one or both reactors, Specification 15.3.7.B.1.e permits one of the two diesel generators to be inoperable for a period not exceeding seven days. If these limiting conditions for operation (LCO) cannot be satisfied under the provisions of Technical Specification 15.3.0.A, the affected units shall be shut down and placed in the hot shutdown condition within three hours. At 1600 hours on April 9, 1990, the Point Beach Manager's Supervisory Staff, acting upon information supplied by our corporate engineering staff, determined that, due to the potential for seismic induced failure of the fuel oil line from the on-site storage tanks to the diesel generators, the LCO regarding availability of a fuel supply of 11,000 gallons was not satisfied. Since this diesel generator support system affects both units under the technical specifications cited above, we are required to shut down Point Beach Unit 2 (Point Beach Unit 1 is presently shut down and is in a refueling shutdown condition) within three hours of this declaration.

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It is this situation for which a seven day Temporary Waiver of Compliance was orally requested by a telephone call to Mr. Jeff Wright of the NRC Region III staff at about 1620 hours on April 9, 1990.

2. Circumstances Surrounding the Situation

Point Beach Nuclear Plant was constructed during the period from July 1967 through November 1971. Unit 1 was placed in operation on December 21, 1970, and Unit 2 began commercial operation on October 1, 1972. Point Beach was constructed as a turnkey project by Westinghouse Electric Corporation as the NSSS Contractor, with Bechtel Corporation as the Architect Engineer. Given the turnkey nature of the project and the vintage of the plant, we have found that the basis for original design conditions is not always sufficiently documented and accessible. Recently, we have begun efforts to re-examine and reconstitute the design basis for selected systems at the Point Beach Nuclear Plant. This process is currently being applied to the electrical system and the emergency diesel generators (EDG). The Emergency Power System, including the EDG, is described in Section 8.2.3 of the Point Beach FSAR.

The seismic adequacy of the fuel oil transfer piping was being evaluated in response to Item 4(a) of NRC Inspection Reports. 50-266/89012(DRS) and 50-301/89011(DRS) dated June 6, 1989. We had committed to the NRC by letter NRC-90-001 dated January 8, 1990 that a revised calculation would be performed by July 1990 to reflect the as-built configuration of the piping system. Since the piping contained no horizontal restraints, a modification to the support system to provide horizontal restraint was being designed. Additionally, an appropriate response spectrum for the fuel oil pumphouse upon which to perform an evaluation could not be obtained until late February. We were working with this information at the time of the recent electrical inspection to confirm the fuel oil piping seismic qualification and define modifications to piping and/or supports, if required.

On April 9, 1990, during the process of verifying design calculations, our corporate engineering group determined that fuel oil piping and piping supports in the fuel oil pumphouse could not be demonstrated to perform its support function under the loading conditions imposed by an operating basis seismic event. A failure of this fuel line would prevent the flow of fuel oil from the underground storage tank to the EDG. The engineering staff requested that a formal determination of operability be made. At about 1600 hours on April 9, the Manager's Supervisory Staff determined that the fuel oil

supply sysem was inoperable because of the potential unavailability of the Technical Specification required 11,000 gallons of fuel oil following a seismic event at the Point Beach site. Under the circumstances of the three hour LCO for this condition, it was imperative that we contact the NRC at once regarding the possibility for a temporary waiver of compliance. For the reasons discussed in more detail below, we believe the circumstances in this situation support the granting of this waiver request. We believe that the conditions associated with the Temporary Waiver constitute a preferable alternative to the transients associated with the option of a temporary plant shutdown and subsequent restart. We also wish to inform you that there is a need for the 495 MW of electricity presently being generated by Point Beach Unit 2. In addition to Point Beach Unit 1, which is shut down for refueling, one of our major fossil units is also shut down. We have been purchasing 500 MW of power from other utilities as a result. In addition, the Wisconsin Public Service Kewaunee Nuclear Plant, located just five miles north of the Point Beach Nuclear Plant, is shut down, and thus there is a significant shortage of electrical generating capacity in the northeast and east central areas of Wisconsin.

3. Discussion of Compensatory Actions

Based upon the diesel fuel oil piping operability question, Wisconsin Electric immediately proceeded to acquire a minimum 11,000 gallon fuel oil supply by acquiring at least two tanker trucks for dedicated use.

- The first tanker was loaded with 7,200 gallons. Upon arrival at 1915 hours, the contents of this tanker was sampled. The tanker truck is presently stationed at a safe location on the plant site.

- A second empty tanker was obtained. Upon arrival at 1837 hours, this tanker was filled with approximately 7,000 gallons of fuel oil from the PBNP above-ground FO storage tanks. Following completion of fill, the tanker truck was sampled. The tanker is presently stationed at a safe location on the plant site.

- Sample analysis showed the fuel to be acceptable. It was noted that the cloud point was acceptable for this time of the year.

- All equipment needed to accomplish transfer of fuel oil from the tankers to the EDG day tanks was available and properly located at 2310 hours. Follow-up verification of the oil

supplies and transfer mechanisms was performed at 0900 hours on April 10.

- To protect both the on-site fuel oil supplies and the fuel oil pumphouse in an unlikely seismic event, the above-ground storage tanks are under the administrative control of the Duty Shift Superintendent with the supply valves to the emergency fuel oil tank and gas turbine supply pump closed. The supply valves, if opened, for emergency fuel oil tank refilling or gas turbine operations, will be capable of being closed by a designated individual. The operating shift will be augmented to accomplish fuel oil transfer system valve alignments and connection to the tanker trucks.

- A test to demonstrate the adequacy of our contingency actions has been completed. The test demonstrated the transfer of fuel oil from a tanker truck to a test container. This test reaffirmed the ready availability of tools and hardware needed to accomplish fuel transfer and verified that the transfer from the tanker trucks to the day tanks can be initiated within four hours.

4. Safety Significance and Potential Consequences

We emphasize that the Emergency Power Systems at the Point Beach Nuclear Plant are presently, and are expected to remain, fully operational. As discussed in Item 2 above, we have conservatively declared the fuel oil supply inoperable because of the inability to demonstrate its continued functionality in the event of a seismic occurrence at the Point Beach site. We have determined, based on a 1,000 year return period for a 0.06g operating basis earthquake at the Point Beach site that the probability of a seismic event at the site during the seven days for which this waiver has been requested is less than 2.0×10^{-5}. Thus, the possibility of a failure of the diesel fuel oil supply system during the period of this waiver request is extemely low.

Notwithstanding the unlikelihood of a diesel fuel line failure, we have also taken steps as discussed in Item 3 above, to have available additional sources of EDG fuel oil. In the event of an incident requiring the use of the emergency power system, each EDG is equipped with a 550 gallon fuel tank in the base of each unit and an adjacent 550 gallon day tank. The day tanks can be cross-connected allowing either tank to supply either unit. This tankage is not affected by the condition of the fuel oil supply line in the pumphouse. Each EDG is designed to be capable of supplying the accident loads in one unit and the safe shut down loads in the second unit. Each EDG has available, therefore, approximately 1,000 gallons

of fuel in its own base tank and day tank and 500 gallons from the other unit's day tank. Given the rated EDG fuel consumption of 205 gallons/hour at rated load, we have sufficient, immediately available, fuel to run both diesels generators for more than four hours or one diesel generator for more than seven hours. Within that time, we would be able to move the on-site standby fuel oil tankers into position and connect to the fuel oil system in order to continue to supply the diesel generators.

With two available tankers and the ability to shuttle fuel oil from on-site and off-site fuel oil tankage, we could continue to supply the EDG indefinitely. We believe, therefore that the potential consequences of this temporary waiver are no different from those of accidents previously evaluated and the potential impact and safety significance of this action on the public health and safety is very low.

5. Justification for the Duration of the Waiver

We have requested that this temporary waiver be extended for a seven day period. During this time period, we shall continue to work on and complete the design of seismically qualified pipe supports for the fuel oil piping in the fuel oil pumphouse. The necessary support components will then be fabricated and installed under an approved modification request. We believe all components to fabricate the support, with the exception of some U-bolts, are already onsite. We have initiated efforts to procure the necessary bolts. It is anticipated that these efforts, including approvals by the Manager's Supervisory Staff and approval of the 10 CFR 50.59 evaluation concerning this modification, can be completed within this seven day period.

6. Discussion of Significant Hazards Considerations

The NRC regulations at 10 CFR 50.92 state that a Temporary Waiver of Compliance will not involve a significant hazards consideration if the Temporary Waiver of Compliance does not:

a) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
b) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
c) Involve a significant reduction in a margin of safety.

The discussion below addresses each of these three criteria and demonstrates that this Temporary Waiver of Compliance does not involve a significant hazards consideration.

As discussed in Item 4 above, we have determined that the safety significance and potential consequences of this Temporary Waiver of Compliance are very slight. Due to the nature of the concern in this matter, that is a failure of the EDG fuel oil supply due to a seismic event, and the low probability of such an event (2.0×10^{-5} over the seven days) we believe there has been no significant increase in the probability of an accident previously evaluated. Under Item 4, we also discussed the continued availability of the normal fuel oil supply for a period of at least four hours for both EDG or more than seven hours for one diesel generator. We have provided for an alternate source of long term fuel oil supply for the EDG. We conclude, therefore, that the consequences of an accident previously evaluated have not significantly increased.

We have also evaluated this situation to determine whether this action creates the possibility for a new or different kind of accident from any accident previously evaluated. The action of granting a seven day Temporary Waiver of Compliance for this specific LCO certainly, of itself, cannot create such a possibility. The plant has been previously evaluated for a variety of design basis accidents including the single failure of a safety system due to a seismic event. While the failure of the fuel oil supply line could ultimately disable both EDG, the plant has been evaluated for the loss of all on-site AC power under the Station Blackout Rule and has an on-site alternate source of AC power in the form of a 20 MW gas turbine generator. Thus, we do not believe this action creates the possibility for a new or different kind of accident.

As discussed previously in Item 4, there is a very low probability of a seismic occurrence during the seven day waiver period. Because of the compensatory measures we have taken, we believe the consequences of such a low probability accident have not significantly changed. Accordingly, we can conclude that there will be no significant reduction in a margin of safety and, therefore, this Temporary Waiver of Compliance does not involve a significant hazard consideration.

7. Discussion of Environmental Consequences

This request does not involve a change in the installation or use of the facilities or components located within the Point Beach Nuclear Plant restricted areas as defined in 10 CFR 20. Wisconsin Electric has determined that this Temporary Waiver of Compliance involves no significant increase in the amounts

and no significant change in the types of any effluents that may be released off-site and that there is no significant increase in individual or cummulative occupational radiation exposure. Accordingly, this Temporary Waiver of compliance meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the granting of the temporary waiver of compliance.

Based on the information provided to the Region III staff in our telephone call on April 9, 1990, we were advised by Mr. Wright in a telephone call at approximately 1710, that the NRC would grant an interim approval of this Temporary Waiver of Compliance pending receipt of this formal written request within 24 hours. We believe the information provided herein confirms and supports the information provided to you during the April 9 telephone call. We confirm that the actions discussed in this letter and the request for the Temporary Waiver of Compliance has been reviewed and approved by the Manager's Supervisory Staff.

If you have any questions concerning the information provided in this letter, please notify us at once.

Very truly yours,

C. W. Fay
Vice President
Nuclear Power

Copy to NRC Residential Inspector
Assistant Director for Projects, Office of Nuclear Reactor Regulation