



**Wisconsin
Electric**
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VPNPD-92-029
NRC-92-005

10 CFR 50.4
10 CFR 50.90

January 17, 1991

U.S. NUCLEAR REGULATORY COMMISSION
Document Control Desk
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Washington, D.C. 20555

Gentlemen:

DOCKETS 50-266 AND 50-301
TECHNICAL SPECIFICATION CHANGE REQUEST 148
REVISION OF LOGGING REQUIREMENTS AND CLARIFICATION
OF A TEST REQUIREMENT IN TABLE 15.4.1-1,
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

In accordance with the requirements of 10 CFR 50.4 and 50.90, Wisconsin Electric Power Company (Licensee) hereby requests amendments to Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2 respectively, to incorporate changes to the plant's Technical Specifications. Marked-up Technical Specification pages, the Safety Evaluation, and the Significant Hazards Consideration required by 10 CFR 50.91(a) are included in the enclosures to this change request.

Technical Specifications Table 15.4.1-1, "Minimum Frequencies for Checks, Calibrations, and Test of Instrument Channels" discusses the check, calibration, and test requirements for forty-three different instrument channels. Items 9, 10, and 12 of this table, namely Analog Rod Position, Rod Position Bank Counters, and Steam Generator Flow Mismatch, are required to be checked each shift whenever the reactor is in a condition other than refueling shutdown. There are no shiftly check requirements for these three instrument channels when the reactor is in a refueling shutdown, except that these channels must be checked prior to starting up if they have not been checked during the previous shift.

Item 4 of this same table concerns the check, calibration, and test requirements for Reactor Coolant Temperature. A portion of this item requires a monthly test of Overtemperature delta T function when the reactor is in a condition other than refueling shutdown. If the reactor is in a refueling shutdown, this

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monthly test does not need to be performed. However, it is required prior to starting up if the test has not been performed during the previous month. The Overpower delta T function is another portion of Item 4. The problem with Overpower delta T is that the notation used in the table does not clearly define this item's test requirements. The actual test requirements for this item are identical to those of Overtemperature delta T, but the table could be interpreted to require the Overpower delta T function to be tested monthly during all plant conditions.

We propose to revise the check frequency for Analog Rod Position, Rod Position Bank Counters, and Steam Generator Flow Mismatch. These three items should be documented once per shift, except when the plant is in a cold or refueling shutdown. These items will be required to be checked prior to start-up if they have not been checked during the previous shift. This check frequency will be indicated by "S" followed by the number corresponding to any associated remarks, if any, and finally "*****" in the "Check" column of Table 15.4.1-1. The five asterisks will correspond to the following code description to be added to the bottom of Pages 1, 2, and 4 of Table 15.4.1-1:

"Not required during periods of cold and refueling shutdowns but must be performed prior to starting up if it has not been performed during the previous surveillance period."

Additionally, we propose to add two asterisks following "(2)" in the test column for Item 4 of Table 15.4.1-1. This will indicate that Overpower delta T is required to be performed monthly except during periods of refueling shutdown, but it must be performed prior to starting up if it has not been performed during the previous month. This will ensure the test requirements for Overpower delta T are identical to the test requirements for Overtemperature delta T.

Table 15.4.1-1, "Minimum Frequencies for Checks, Calibrations, and Test of Instrument Channels" lists the periodicity of checks, calibrations, and tests for reactor and steam system instrumentation. The frequency of performing checks of the instrumentation is based on ensuring the safe operation of the plant. Calibrations are performed to ensure the presentation and acquisition of accurate plant information. Testing is performed to ensure that the instrumentation continues to perform at its required level.

The changes to this table that are proposed simply remove the requirement to log three redundant parameters while the plant is in cold shutdown and clarify the testing requirements for one

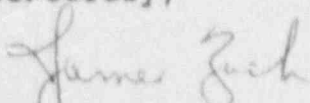
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item. These changes are not safety significant and do not require immediate attention.

Finally, the changes proposed in this Technical Specification change request do not require an environmental review. These amendments are excluded from a review because they meet the conditions specified in 10 CFR 51.2.c.9.

Please contact us if there are any questions.

Sincerely,




James J. Zach
Vice President
Nuclear Power

Enclosures

Copies to NRC Regional Administrator, Region III
NRC Resident Inspector
Public Service Commission of Wisconsin

Subscribed and sworn to before me
this 17th day of January 1992.


Notary Public, State of Wisconsin

My Commission expires on 5-22-94.

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SAFETY EVALUATION

7. INTRODUCTION

Wisconsin Electric Power Company (Licensee) has applied for amendments for Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2. These amendments propose to remove the requirements to check Analog Rod Position, Rod Position Bank Counters, and Steam Generator Flow Mismatch when the reactor is in cold shutdown. These amendments additionally propose to clarify the test requirements for the Overpower delta T function to ensure consistency with the test requirements for the Overtemperature delta T function.

EVALUATION

Presently, Table 15.4.1-4, "Minimum Frequencies for Checks, Calibrations, and Test of Instrument Channels," has different check requirements for Analog Rod Position, Rod Position Bank Counters, and Steam Generator Flow Mismatch, depending whether the plant is in a cold or a refueling shutdown. In the Technical Specifications, cold shutdown is defined as a condition when the reactor has a shutdown margin of at least one percent delta k/k and a reactor coolant temperature ≤ 200 degrees. The reactor is in a refueling shutdown condition when the reactor is subcritical by at least 5 percent delta k/k and reactor coolant temperature is ≤ 140 degrees. Two major concerns during any plant condition are to be able to monitor for reactivity changes and for the presence of a heat sink.

Analog Rod Position and Rod Position Bank Counters are two indications used in the monitoring of rod position. Rod position monitoring is intended to alert operators to reactivity changes that could be taking place. These two indications do not need to be monitored when the plant is in cold shutdown for the following reasons:

1. The operator is required, by procedure, to verify that all control rods are fully inserted and that the reactor trip breakers and bypass breakers are open in order to enter a cold shutdown condition. This ensures that all control rods are on the bottom. It also ensures that no rod motion can occur because all the Control Rod Drive Mechanisms (CRDMs) are deenergized.
2. Having all rods on the bottom is verified on a regular shift basis by monitoring the rod bottom lights when Rod Position Indicators are energized.

3. Source and Intermediate Range detectors are constantly monitored to alert operators to any reactivity changes that may occur. These parameters are documented on the cold shutdown logs.
4. Analog Rod Position and Rod Position Bank Counters are presently not required to be checked when the plant is in a refueling shutdown condition.

Steam Generator Flow Mismatch indicates the difference between the rate of feedwater flow into the steam generator and the rate of steam flow out of the steam generator. This indication provides an indication of the presence of a heat sink when the steam generator is being used as a heat sink for the primary system. This indication is not required to be monitored when the plant is in cold shutdown for the following reasons:

1. The Residual heat Removal System is required to be placed in operation prior to entering cold shutdown. This system is the primary means of decay heat removal when the plant is in a cold or refueling shutdown condition. Parameters associated with the Residual Heat Removal System are documented on the plant cold shutdown logs.
2. When the plant is in a cold or refueling shutdown condition, reactor coolant temperature is less than 200 degrees. This means that there can be no steam formation in the steam generator and, thus, no steam flow from the steam generator. Therefore, Steam Generator Flow Mismatch provides no useful indication when the plant is in either of these two plant conditions.
3. In order for a steam generator to be considered operable for decay heat removal, the Technical Specifications require two sources of water to that generator, water level indication in the generator, a vent path to atmosphere, and the reactor coolant system filled and vented so that thermal convection cooling of the core is possible.

When in cold shutdown, both steam generator level and pressure are logged on a shiftly basis. Monitoring steam generator level provides the water level indication required by the Technical Specifications, and steam generator pressure provides an indication of the presence of a vent path to atmosphere. Therefore, these two indications provide information concerning the operability of a steam generator for decay heat removal.

The Overtemperature delta T and Overpower delta T functions both provide inputs for protective reactor trips. The Overtemperature delta T reactor trip provides core protection against a departure from nucleate boiling for all combinations of pressure, power, coolant temperature, and axial power distribution. The Overpower delta T reactor trip prevents power density anywhere in the core from exceeding 108% of design power density.

Currently both the Overtemperature and Overpower delta T trips are tested monthly except when the plant is in a refueling shutdown. This test is then required to be performed prior to starting up if it has not been performed during the previous month. Table 15.4.1-1, Item 4, is unclear in its notation because it appears that the monthly test of Overpower delta T function is still required to be performed when the reactor is in refueling shutdown. This can be clarified by making a simple administrative change to the test frequency portion of Table 15.4.1-1, Item 4. This will ensure that the test requirements for the Overpower delta T function are identical to the requirements for the Overtemperature delta T function.

CONCLUSIONS

In summary, with all control rods on the bottom, Control Rod Drive Mechanisms deenergized, and continuous monitoring of the Source and Intermediate Range detectors, it is not necessary to monitor Analog Rod Position and Rod Position Bank Counters when the plant is in cold shutdown.

Additionally, it is not necessary to monitor Steam Generator Flow Mismatch when the reactor is in cold shutdown because parameters associated with the Residual Heat Removal System are monitored. This system is required to be placed in operation prior to entering cold shutdown. It is also the primary means of decay heat removal when the reactor is in a cold or a refueling shutdown. Steam generator level and pressure are also monitored when the plant is in cold shutdown, providing additional indications of the presence of a heat sink.

Finally, the change proposed to the test requirements for the Overpower delta T function is simply an administrative change to clarify the requirements. This will ensure that both the Overpower delta T and Overtemperature delta T functions have the same test requirements.

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"NO SIGNIFICANT HAZARDS CONSIDERATION"

In accordance with the requirements of 10 CFR 50.91(a), Wisconsin Electric Power Company (Licensee) has evaluated the proposed changes to the Technical Specifications against the standards of 10 CFR 50.92 and has determined that the operation of Point Beach Nuclear Power Plant Units 1 and 2 in accordance with the proposed amendments does not present a significant hazards consideration. The analysis of the requirements of 10 CFR 50.92 and the basis for this conclusion are as follows:

1. Operation of this facility under the proposed Technical Specification change will not create a significant increase in the probability or consequences of an accident previously evaluated. This amendment only removes the requirement to log Analog Rod Position, Rod Position Bank Counters, and Steam Generator Flow Mismatch when the plant is in cold shutdown. While in cold shutdown, control rods are fully inserted, the rod power supply is deenergized, and the reactor trip and bypass breakers are open, ensuring no rod motion. Additionally, the operator is required to monitor Source and Intermediate Range detectors, as well as rod bottom lights when Rod Position Indicators are energized. These requirements ensure that the plant is constantly being monitored for any reactivity changes.

The presence of a heat sink is ensured by monitoring the parameters associated with the Residual Heat Removal System. This system is required to be in operation when the plant is in cold shutdown, and the associated parameters are monitored on cold shutdown logs. Additionally, Steam Generator Level and Pressure are monitored while the plant is in cold shutdown. These two parameters provide indications concerning the operability of a steam generator for decay heat removal.

The proposed change to the test frequency for the Overpower delta T function is simply an administrative change to clarify any confusion associated with the notation. This change will ensure that the test requirements for the Overpower delta T and Overtemperature delta T functions are identical. Since there is no physical change to the facility, its systems, or its operation, an increased probability or consequences of an accident previously evaluated cannot occur.

2. Operation of this facility under the proposed Technical Specification change will not create the possibility of a new or different kind of accident from any accident previously evaluated. This amendment removes the requirement to log the three parameters on a once-per-shift basis when the plant is in cold shutdown. The reason that these parameters are monitored is to ensure that the operator can detect any reactivity changes, as well as ensure the presence of a heat sink. Monitoring Source and Intermediate Range detectors and rod bottom lights when the Rod Position Indicators are energized, along with parameters associated with the Residual Heat Removal System, are sufficient to meet these requirements. Steam Generator Level and Pressure are also monitored and can provide additional indications concerning the operability of a steam generator for decay heat removal.

The proposed change to the test frequency for the Overpower delta T function is simply an administrative change to clarify any confusion associated with the notation. This change will ensure that the test requirements for the Overpower delta T and Overtemperature delta T functions are identical. There is no physical change to the facility, its systems, or its operation. Thus, a new or different kind of accident cannot occur.

3. Operation of this facility under the proposed Technical Specification change will not create a significant reduction in a margin of safety. Under this proposed amendment, Analog Rod Position, Rod Position Bank Counters, and Steam Generator Flow Mismatch are not required to be logged when the plant is in cold shutdown. These parameters are monitored to ensure the presence of a heat sink and the swift detection of any reactivity changes. The presence of a heat sink is ensured by monitoring the parameters associated with the Residual Heat Removal System. This system is required to be in operation when the plant is in cold shutdown. Steam Generator Level and Pressure are also monitored, and provide indications concerning the operability of a steam generator for decay heat removal.

Prior to placing the plant in cold shutdown, the operator, by procedure, must ensure that all control rods are fully inserted and that the reactor trip and bypass breakers are open. This ensures that there can be no rod motion. In order to detect any reactivity changes, Source and Intermediate Range detectors are monitored, as well as the

rod bottom lights when the Rod Position Indicators are energized. Monitoring of these parameters is sufficient to ensure the presence of a heat sink and the swift detection of any reactivity changes. Thus, monitoring Analog Rod Position, Rod Position Bank Counters, and Steam Generator Flow Mismatch is redundant and is not required when the plant is in cold shutdown.

The proposed change to the test frequency for the Overpower delta T function is simply an administrative change to clarify any confusion associated with the notation. This change will ensure that the test requirements for the Overpower delta T and Overtemperature delta T functions are identical. Since this amendment does not change the facility, its systems, or its operation, a significant reduction in a margin of safety cannot occur.

Based on the above discussion, Wisconsin Electric Power Company (Licensee) concludes that the operation of Point Beach Nuclear Plant, Units 1 and 2 in accordance with the proposed changes does not result in a significant hazards consideration.