



231 W Michigan, PO Box 2046, Milwaukee, WI 53201-2046

(414) 221-2345

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10 CFR 50.4
10 CFR 50.90

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U.S. NUCLEAR REGULATORY COMMISSION
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Gentlemen:

DOCKETS 50-266 AND 50-301
TECHNICAL SPECIFICATIONS CHANGE REQUEST 168
MODIFICATION TO TS 15.3.3, "EMERGENCY CORE COOLING SYSTEM,
AUXILIARY COOLING SYSTEMS, AIR RECIRCULATION FAN COOLERS, AND
CONTAINMENT SPRAY;" 15.3.4, "STEAM AND POWER CONVERSION SYSTEM;"
AND 15.3.7, "AUXILIARY ELECTRICAL SYSTEMS"
POINT BEACH NUCLEAR PLANTS, 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 Technical Specifications.

The proposed revisions will modify Technical Specification Sections 15.3.4, "Steam and Power Conversion System," and 15.3.7, "Auxiliary Electrical Systems," to increase the allowed outage times for one motor driven auxiliary feedwater pump and for the standby emergency power for the Unit 1 Train B 4160 Volt safeguards bus (A06) from 7 to 12 days. Section 15.3.3, "Emergency Core Cooling System, Auxiliary Cooling Systems, Air Recirculation Fan Coolers, and Containment Spray," will be modified to provide the clarification that the service water pump (P-32E) operating with power supplied by the Alternate Shutdown System is operable from off-site power. These are one-time extensions of specific allowed outage times. Marked-up Technical Specifications pages, a safety evaluation, and the no significant hazards consideration are provided as attachments to this letter.

We are performing a modification that will install two additional emergency diesel generators and reconfigure portions of the 4160 Volt emergency electrical power system at our Point Beach Nuclear Plant. The first connection of the output of one of the

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additional emergency diesel generators into the existing safeguards bus electrical system is planned to take place during the fall 1994 Unit 2 refueling outage presently scheduled to start on September 24, 1994.

During the connection process, Unit 2 will be defueled; however, some shared equipment that supports the operation of Unit 1 could be out of service for longer than the present Technical Specification allowed outage time. This license amendment request is necessary to allow the safe continued operation of Unit 1 while the connection of the first additional EDG (G-04) is taking place.

DESCRIPTION OF CURRENT LICENSE CONDITION

Technical Specification Section 15.3.3, "Emergency Core Cooling System, Auxiliary Cooling Systems, Air Recirculation Fan Coolers, and Containment Spray," specifies the limiting conditions for operation for the service water system. Specification 15.3.3.D.1.a states that neither reactor shall be made or maintained critical unless four service water pumps are operable.

Technical Specification 15.3.4, "Steam and Power Conversion System," specifies the limiting conditions for operation for the auxiliary feedwater system. Specification 15.3.4.C.2 states that for single unit operation either one of the two motor driven auxiliary feedwater pumps may be out-of-service for up to 7 days.

Technical Specification 15.3.7, "Auxiliary Electrical Systems," specifies the limiting conditions for operation for the standby emergency power supplies for the engineered safeguards buses. Specification 15.3.7.B.1.h, proposed in our May 26, 1994, Technical Specifications Change Request #166, for the installation of the new emergency diesel generators, states that the standby emergency power supply to Unit 1 A06/B04 and Unit 2 A06/B04 may be out of service for a period not exceeding 7 days provided the redundant engineered safety features are operable and the required redundant standby emergency power supplies are started within 24 hours before or after entry into this LCO and every 72 hours thereafter.

DESCRIPTION OF PROPOSED CHANGES

This Technical Specification change request proposes to revise the allowed outage time (AOT) for one motor driven auxiliary feedwater pump from 7 to 12 days during the Unit 2 1994 refueling outage. A footnote is being added to Specification 15.3.4.C.2 which states:

- "* During the Unit 2 1994 refueling outage, P-38B, the Train B motor driven auxiliary feedwater pumps may be out-of-service for up to 12 days."

A footnote is being added to (proposed in Technical Specifications Change Request #166) Specification 15.3.7.B.1.h, to revise the AOT for the Train B standby emergency power supply from 7 to 12 days, which states:

"* During the Unit 2 1994 refueling outage, standby emergency power to Unit 1 A06/B04 and Unit 2 A06/B04 may be out-of-service for up to 12 days."

A footnote is being added to Specification 15.3.3.D.1.a, to provide clarification regarding the operability of a service water pump powered from alternate shutdown, which states:

"* During the Unit 2 1994 refueling outage, one train B service water pump operating with power supplied by the Alternate Shutdown System, B08/B09 480 volt buses, may be considered operable from a normal (off-site) power supply, under the provisions of Technical Specification 15.3.0.C."

BASIS AND JUSTIFICATION

The connection of one of the new emergency diesel generators during the Unit 2 refueling outage will require that the Train B safeguards buses in Unit 2 be reconfigured. During the reconfiguration, power will be supplied to the Unit 2 Train B 480 Volt safeguards bus (B04) by a tie-breaker from the Unit 2, Train A, 480 Volt safeguards bus (B03). The use of the tie-breaker is limited by proposed Technical Specification 15.3.7.B.1.e, proposed in our May 26, 1994, Technical Specifications Change Request #166 (approval expected prior to the Unit 2 outage), for the installation of the new emergency diesel generators, which states:

With a unit defueled, one pair of buses for the defueled unit, A05 and A06 or B03 and B04, may be tied together through their common tie-breaker in excess of 8 hours provided:

- 1) An evaluation is performed to show that the loads that remain or can be energized by the buses will not cause a potential overload of the associated diesel generator. The applicable Limiting Conditions for Operation of the equipment removed from service shall be entered for the operating unit.
- 2) A single train of spent fuel cooling is adequate to cool the spent fuel pool.
- 3) The required redundant shared engineered safety features for the other unit are operable.

Unit 2 will be defueled during the connection process. LCOs will be entered for the following equipment for Unit 1: The motor driven auxiliary feedwater pump (TS 15.3.4.C.2), which will be removed from service, and the standby emergency power LCO for Unit 1 A06 and Unit 2 A06 (Proposed TS 15.3.7.B.1.h from Technical Specifications Change Request #166).

The motor driven auxiliary feedwater pump LCO will be applicable, because the motor driven auxiliary feedwater pump (P-38B), which is powered from Unit 2 B04, will be removed from service to prevent potential overload of the associated (Train A, EDG G-01) emergency diesel generator.

The standby emergency power LCO for Unit 1 A06 and Unit 2 A06 will be applicable because the Train B emergency diesel generator (G-02) will not be able to provide power to at least two service water pumps. Service water provides cooling for the G-02 EDG, in this bus-tie configuration, the G-02 EDG will not be able to supply power to at least two service water pumps to provide adequate cooling to itself or the other engineered safety features functions that require service water.

EDG G-02 will be maintained in the maximum possible state of operational readiness during the connection process. It is expected that EDG G-02 will be taken completely out-of-service during the first day of the connection process to allow modification of the EDG control circuitry. After the control circuitry work is complete, the control circuitry will be tested and maintained in automatic mode to allow EDG G-02 to respond to a Unit 1 Train B undervoltage. Operator actions may be necessary if equipment failures occur. Procedural guidance (contingency actions) will be provided in the connection process procedures.

The service water and auxiliary feedwater systems are shared between Point Beach Units 1 and 2. The service water and auxiliary feedwater pump motors are supplied by the following 480 Volt safeguards bus arrangement:

- Unit 1, A Train, 1B03 powers electric auxiliary feedwater pump P-38A and service water pumps P-32A and P-32B.
- Unit 1, B Train, 1B04 powers service water pump P-32C.
- Unit 2, A Train, 2B03 powers service water pump P-32F
- Unit 2, B Train, 2B04 powers electric auxiliary feedwater pump P-38B and service water pumps P-32D and P-32E.

The three Train A service water pumps powered by the 1B03 and 2B03 buses will remain unaffected by the reconfiguration and bus-tie work. The one service water pump powered from 1B04 will be unaffected except that the standby emergency power source, EDG G-02, will be considered inoperable (see the attached safety evaluation). One of the two service water pumps powered from 2B04 (P-32D) will be removed from service to prevent potential overload of the associated (Train A) emergency diesel generator. The other service water pump normally powered by 2B04 (P-32E) will be operating with power supplied by the Alternate Shutdown System, B08/B09 480 volt buses. As such, it will be considered operable from a normal (off-site) power supply, under the provisions of Technical Specification 15.3.0.C. Therefore, the service water LCO which states that neither reactor shall be made or maintained critical unless four service water pumps are operable will not be entered, because five service water pumps will be operable, three from Train A, one from Train B, and one from the alternate shutdown system.

The estimated time for completion of the activities to restore the standby emergency power, auxiliary feedwater, and service water system to normal is 12 days. The allowed outage times for the applicable LCOs in the PBNP Technical Specifications is 7 days. This is the basis for the request to extend the allowed outage times from 7 to 12 days.

The justification for this change, which will allow the continued safe operation of Unit 1 during this period, includes the compensatory measures that will be invoked and the probabilistic safety assessment that concludes the five additional days of allowed outage time do not pose a significant risk to the health and safety of the public. The attached "Safety Evaluation" and "No Significant Hazards Consideration" provide complete assessments of these provisions for continued safe operation of PBNP Unit 1.

It has been determined that the proposed amendments do not involve a significant hazards consideration, authorize a significant change in the types or total amounts of any effluent release, or result in any significant increase in individual or cumulative occupational exposure. We therefore conclude that the proposed amendments meet the requirements of 10 CFR 51.22(c)(9) and that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared.

Issuance of this amendment to the Point Beach Technical Specifications will be required to support the reconfiguration of the emergency electrical power distribution system during the

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Unit 2 1994 refueling outage, scheduled to begin September 24, 1994. As such, we request issuance of this change request by no later than September 24, 1994.

Please feel free to contact us if you have any questions.

Sincerely,

Bob Link
for

Bob Link
Vice President
Nuclear Power

Attachments

CAC/jg

cc: NRC Regional Administrator
NRC Resident Inspector
Public Service Commission of Wisconsin

Subscribed and sworn before me on
this 9th day of August 1994.

Jacqueline Grevi
Notary Public, State of Wisconsin

My commission expires 10/27/96.

TECHNICAL SPECIFICATION CHANGE REQUEST 168
SAFETY EVALUATION

Introduction

Wisconsin Electric Power Company (Licensee) has applied for amendments to Facility Operating Licenses DPR-24 and DPR-27 for Point Beach Nuclear Plant, Units 1 and 2. The amendments propose to revise the Technical Specification Limiting Conditions for Operation to allow a one-time extension of the Allowed Outage Times during the Unit 2 1994 refueling outage for one motor driven auxiliary feedwater pump and standby emergency power for Unit 1 4160 Volt safeguards buses, Unit 1 A06 and Unit 2 A06, from 7 to 12 days and provide the clarification that the one service water pump (P-32E) operating with power supplied by the Alternate Shutdown System is operable from off-site power.

We are performing a modification that will install two additional emergency diesel generators and reconfigure portions of the 4160 Volt emergency electrical power system at our Point Beach Nuclear Plant. The first connection of the output of one of the additional emergency diesel generators (EDG G-04) and the associated electrical distribution equipment into the existing safeguards bus electrical system is expected to take place during the fall 1994 Unit 2 refueling outage presently scheduled to start on September 24, 1994.

During the connection process, some shared equipment that supports the operation of Unit 1 could be out of service for longer than the present Technical Specification allowed outage times. This license amendment request is necessary to allow the safe continued operation of Unit 1 while the connection is taking place. Unit 2 will be defueled and hence not affected by the connection process.

Scope of Activities

The connection of one of the new emergency diesel generators during the Unit 2 refueling outage will require that the Train B safeguards buses in Unit 2 be reconfigured (see the attached figure titled PHASE 3A). The 4160 Volt supply bus for Unit 2 Train B (2A04) and the 4160 Volt safeguards bus for Unit 2 Train B (2A06) will be out-of-service/de-energized, during the reconfiguration, to support the connection process. Power will be supplied to the Unit 2 Train B 480 Volt safeguards bus (B04) by a tie-breaker from the Unit 2 Train A 480 Volt safeguards bus (B03). Currently, options for supplying power to the Unit 2 Train B 480 Volt non-safeguards bus (B02) during the period that the non-safeguards 4160 Volt supply bus, Unit 2 A04, is out-of-service are being evaluated.

At the completion of this phase of the modification, G-02 will no longer be a standby emergency power supply for Unit 2, Train B (2A06). G-02 will continue as the standby emergency power supply for Unit 1, Train B (1A06). G-04 will be the standby emergency power supply for Unit 2, Train B (2A06). G-01 will continue as the standby emergency power supply for Unit 1, Train A (1A05) and Unit 2 Train A (2A05).

Description of the Connection Process

The major steps of the connection process include changing the power source of the Unit 2 Train B 480 Volt safeguards bus (2B04) from the existing Unit 2 Train B 4160 Volt safeguards bus (2A06) to the new 2A06, installation of a new supply breaker from the Unit 2 Train B 4160 Volt supply bus (2A04) to the new 2A06 and connection of 2A04 to the new 2A06. The final step will be to establish operability of the new EDG G-04 as a standby emergency power supply for the new 2A06.

EDG G-02 will be maintained in the maximum possible state of operational readiness during the connection process. It is expected that EDG G-02 will be taken completely out-of-service during the first day of the connection process to allow modification of the EDG control circuitry. After the control circuitry work is complete, the control circuitry will be tested and maintained in automatic mode to allow EDG G-02 to respond to a Unit 1 Train B undervoltage. Operator actions may be necessary if equipment failures occur. Procedural guidance (contingency actions) will be provided in the connection process procedures.

The work control procedures are being prepared based on a detailed plan of the connection process. Evaluations of these work control procedures, as required by 10 CFR 50.59, are being performed and documented. Preliminary evaluation results have concluded that the work being performed does not pose an unreviewed safety question.

System Descriptions

The attached figure titled "ELECTRICAL DISTRIBUTION - INCLUDING DC" shows the electrical distribution system for PBNP. The main sources of power at PBNP are the two main unit generators rated at 622,388 KVA at a power factor of 0.9. Additionally, at the start of the connection there will be two General Motors Corporation, Electro-Motive Division, Model 999-20 diesel engine-generator units, each rated at 2,850 kw continuous, 0.8 power factor, 900 rpm, 4,160 volts, 3-phase, 60 cycle. There will be three of these units available at the end of the connection process during the 1994 Unit 2 refueling outage.

The other source of AC power at PBNP is a gas turbine rated approximately 23.1 MVA and normally used for spinning reserve, blackout, and for peaking purposes. This gas turbine unit is connected to the auxiliary electrical system such that it can be paralleled with, or serve in lieu of, the normal source of plant off-site power, and can therefore supply power to the Point Beach Nuclear Plant in case of an area "blackout" in which off-site AC voltage is unavailable.

The electrical output of both units is integrated into Wisconsin Electric Power Company's 345 KV transmission system which presently has 345 KV interconnections with Commonwealth Edison Company, Northern States Power Company, Wisconsin Public Service Corporation, and Wisconsin Power and Light Company. Four 345 KV transmission lines are connected to the plant switching station and are on separate line structures in order to minimize the possibility of losing more than one circuit at a time.

It is expected that during the connection process Unit 1 will be operating at full power, at least three of the transmission lines, one of the EDGs (EDG G-01), and the gas turbine (G-05) will be available and operable. The section of this Safety Evaluation called "Compensatory Measures," describes the additional measures that will be used to provide assurance that these features will be available and the actions that are to be taken to compensate for the equipment that is not operable.

Operating Unit 1 at full power during these proposed LCOs does not pose a significant increase in the risk to the health and safety of the public (see the Probabilistic Safety Assessment section of this Safety Evaluation, below).

Evaluation of the Electrical Distribution System

As required by TS 15.3.7.B.1.f (proposed TS 15.3.7.B.1.e, from Technical Specifications Change Request #166), an evaluation has been performed to show that the loads that remain or can be energized by the buses will not cause a potential overload of the associated diesel generator during the time the bus-tie breaker is in use. Operability of the safeguards buses is based on maintaining at least one on-site AC power source and associated distribution system operable during accident conditions coincident with an assumed loss of off-site power and a single failure in the other on-site AC source.

This evaluation includes a failure of a tie-breaker to trip, which under certain conditions could result in an overload and a loss of the associated diesel generator. This evaluation was performed assuming that only the B03 to B04 tie breaker fails to trip. The B04 to B02 tie breaker, if it is used, is assumed to successfully trip open during an undervoltage. This is appropriate because by

application of single failure methodology it is assumed that if the B04 to B02 tie breaker failed to trip, the B03 to B04 tie breaker would be considered to successfully trip which would isolate B03 from both B04 and B02.

Additional evaluations have been performed to verify that the electrical distribution system would remain operable during and following a design basis accident for degraded voltage, undervoltage, and normal voltage situations.

Evaluation of a Loss of Off-site power (LOOP)

In order to assure that sufficient equipment will be operable to achieve and maintain safe shutdown of Unit 1, operator action must be taken to reduce the service water flow rate to within the capacity of a single service water pump. This assumes the most limiting single-failure in the electrical system would be EDG G-01, because this would incapacitate all the AC powered equipment in Train A. The equipment powered from the Unit 1 Train B safeguards buses (1A06 and 1B04) required for safe shutdown of Unit 1 would remain operable by maintaining EDG G-02 available to operate.

Service water, in the above scenario, would be supplied by one service water pump (P-32C), which would be sufficient for safe shutdown of Unit 1 with operator action, because a LOOP event requires less service water flow than accidents in which safety injection actuation occurs. During a LOOP, the service water flow is low enough to conclude that a single service water pump would remain operable in minimal runout until operator action is taken. Both of the electric motor driven auxiliary feedwater pumps would fail to operate in a LOOP with a failure of EDG G-01 during the time period when the buses are tied together. In this case, auxiliary feedwater would be supplied by the turbine driven auxiliary feedwater pump, which can provide sufficient auxiliary feedwater flow to mitigate any accident that requires auxiliary feedwater.

Evaluation of Auxiliary Feedwater Capability

The most limiting single-failure for the auxiliary feedwater system would be the Unit 1 turbine driven auxiliary feedwater pump. In this case, both emergency diesel generators would be assumed to operate, yet only the one Train A electric motor driven auxiliary feedwater pump (P-38A) would be available because the Train B pump (P-38B) is out of service. The Train A electric motor driven auxiliary feedwater pump can provide sufficient flow to mitigate accidents that require auxiliary feedwater, except it normally provides auxiliary feedwater to the Loop A Steam Generator. Therefore, accidents that require isolation of the Loop A Steam Generator could be mitigated by realignment of electrical systems to provide power to the Train B auxiliary feedwater pump (P-38B) or

manual cross-connection of the Train A and Train B auxiliary feedwater flow lines, if the turbine driven auxiliary feedwater pump has failed.

Entry into the electric motor driven auxiliary feedwater pump LCO (TS 15.3.4.C.2) is appropriate, because a temporary relaxation of the single failure criterion for the auxiliary feedwater system is necessary for this situation. The proposed allowed outage time extension from 7 to 12 days is consistent with overall reliability considerations, to allow a time period during which this modification can be completed and the system restored to full operability.

Evaluation of a Loss of Coolant Accident (LOCA) with a Loss of Off-site power (LOOP)

Sufficient equipment will be operable to maintain spent fuel pool cooling and mitigate a LOCA in Unit 1, if a LOCA and LOOP occur during the connection process. Sufficient equipment would not be operable with the most limiting single-failure in the electrical system which would be the failure of EDG G-01. This would incapacitate all the AC powered equipment in Train A.

If EDG G-01 were considered to fail, service water would be supplied by one Train B service water pump (P-32C) which would not be sufficient for accident mitigation in Unit 1. At least two service water pumps are necessary for accident mitigation in which safety injection actuation occurs, such as loss of reactor coolant, in part because of the actuation of containment cooling, which is a large demand for service water flow.

Therefore, entry into the standby emergency power LCO (proposed TS 15.3.7.B.1.h) is appropriate, because a temporary relaxation of the single failure criterion for the standby emergency power system is necessary in this situation. The proposed allowed outage time extension from 7 to 12 days is consistent with overall reliability considerations, to allow a time period during which this modification can be completed and the system restored to full operability.

Additionally, with no failures other than EDG G-01, it would be expected that EDG G-02 could still perform its safety function during a LOCA with a LOOP, if operator action is taken to use the bus-ties as necessary to restore power to Unit 1 Train A and enable the starting of sufficient service water pumps and other required safety systems to mitigate the accident.

Entry into the service water LCO (TS 15.3.3.D.1.a) is not appropriate, because a temporary relaxation of the single failure criterion for the service water system is not necessary in this situation. The TS 15.3.3.D.1.a requirement for at least four

operable service water pumps will be satisfied by three service water pumps in Train A fully operable, one service water pump in Train B and one Train B service water pump operating powered from the alternate shutdown system. The pump operating powered from the alternate shutdown system will be considered operable by the provision of TS 15.3.0.C which states:

When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, the system, subsystem, train, component or device may be considered operable for the purpose of satisfying the requirements of the applicable LCO, provided: (1) the alternate power source (normal or emergency) is operable and (2) all redundancy system(s), subsystem(s), train(s), component(s) and device(s) are operable.

The operating pump powered from alternate shutdown is able to perform its safety function from the alternate shutdown power source. The alternate shutdown system is powered via off-site power or from the on-site gas turbine generator and is being considered a normal power supply for the service water pump.

The Alternate Shutdown System was installed to provide an alternate means of providing power to service water pumps, component cooling water pumps, and residual heat removal pumps for certain 10 CFR 50 Appendix R fire scenarios in which the normal power supplies for this equipment become inoperable. As such, the Alternate Shutdown System is a qualified alternate source of power for the P-32E service water pump.

Station Blackout

10 CFR 50.63, loss of all AC power, requires that each light-water-cooled nuclear power plant licensed to operate must be able to withstand for a specified duration and recover from a station blackout. Currently, PBNP is a 1 out of 2 shared emergency diesel configuration and the PBNP Gas Turbine G-05 is used as an alternate AC power source for station blackout rule compliance.

Core cooling and appropriate containment integrity can be maintained by using the Gas Turbine G-05 as the alternate AC power source if a station blackout occurs during the connection process. Verification of G-05 operability prior to beginning the connection process is one of the compensatory measures listed below.

Spent Fuel Pool Cooling

An evaluation has been performed to show that a single train of spent fuel pool cooling is adequate to cool the spent fuel pool, as required by TS 15.3.7.B.1.f. The spent fuel pool cooling pumps,

P-12A and P-12B, are powered from the 480 volt safeguards buses 2B03 and 1B04, respectively, which will both be available during the connection process.

Compensatory Measures

The following compensatory measures will be invoked to establish appropriate assurance that the required equipment will remain operable during the connection process:

- 1) The gas turbine generator (G05), which is the alternate AC power source for PBNP, will be verified operable by a start and load-run test within 48 hours prior to entry into the standby emergency power LCO. The gas turbine generator will continue to be verified operable by completion of an operational readiness check every 24 hours after the initial test, until the standby emergency power LCO is exited.
- 2) Other maintenance and test activities that could cause inoperability of required equipment, a loss of off-site power, or shutdown of the operating unit will not be scheduled during the period of these LCOs. This will be implemented by the outage planning process at PBNP. The outage planning committee and safety evaluation group will implement this compensatory measure by evaluating specific work activities in a thorough refueling outage safety review process and by maintaining an appropriate outage schedule.
- 3) At least three of the four off-site power 345 KV transmission lines will be in-service during the connection process.
- 4) The Train A EDG (G01) will be tested within 24 hours of entry into the standby emergency power LCO and every 72 hours thereafter, until the LCO is exited, as required by the PBNP Technical Specifications.
- 5) Although this is not considered mandatory because the applicable LCO is being entered, the Train B EDG (G02) will be maintained in the maximum possible state of operational readiness during the connection process.
- 6) A twice per shift (approximately every 4 hours) firewatch in the auxiliary feedwater pump room will be instituted as a compensatory measure for the inoperability of the Train B auxiliary feedwater pump (P-38B) as required by the PBNP Appendix R fire protection program.
- 7) A Senior Reactor Operator with detailed knowledge of the connection process will be on call at all times to provide supplemental guidance to the on-shift Duty Shift Superintendent.

- 8) Guidance for the control of service water and electrical distribution system loading will be established.

These compensatory measures will be implemented as part of the procedures used to perform the connection process and by administrative controls used to plan and schedule the refueling outage.

Contingency Actions

The emergency response organization (ERO), the emergency operating procedures (EOPs), and the shutdown emergency procedures (SEPs) for Point Beach are established and sufficient to protect the health and safety of the public during any emergency. No changes to the ERO, EOPs, or SEPs are necessary for emergency response during the connection process.

The following contingency actions will be invoked as necessary to recover from malfunctions if any should occur during the connection process:

- 1) Alternative methods of restoring power to the safeguards buses will be identified in the procedures used to perform the connection process.
- 2) The Wisconsin Electric System Control Center will have guidance in place that will provide the actions that are necessary to ensure grid stability and off-site power to PBNP. This includes the loss of any single transmission element for all combinations of off-site power lines that can be expected during the connection process.
- 3) The work will be performed in such a manner during the connection process to allow restoration of the electrical system to the state it was in prior to the connection process, if completion of the connection process becomes unworkable.
- 4) Guidance for contingency actions to maintain service water system operability will be provided in the procedures used to perform the connection process.

Probabilistic Safety Assessment

A probabilistic safety assessment (PSA) has been performed for the connection process. The PSA of the connection process used the same PSA models and methodologies as used for the Individual Plant Evaluation (IPE) for Severe Accident Vulnerabilities that was required by Generic Letter 88-20. A summary of the IPE PSA for PBNP was transmitted to the NRC on June 30, 1993 via letter VPNPD-93-123.

The PBNP PSA model was modified to include the effects of the following situations for the connection process:

- o The Train B EDG (G-02) completely out of service for the first day, then G-02 is available with operator action from the second through the twelfth day.
- o The Train B auxiliary feedwater pump (P-38B) not being in automatic.
- o One Train B service water pump (P-32D) not in automatic, and one Train B service water pump (P-32E) powered from the alternate shutdown system.
- o The Unit 2 Train B 4160 volt safeguards and supply buses both out of service and de-energized.
- o The Unit 2 Train B 480 volt safeguards bus (2B04) powered from the Unit 2 Train A 480 volt safeguards bus (2B03).

The results of the PSA show that the differential risk associated with the connection process, expressed in terms of core damage probability (CDP), is approximately $1.30\text{E-}6$. This result is based on a differential core damage frequency of $8.47\text{E-}7$ per day during the first day and $4.14\text{E-}8$ per day for the following 11 days.

In comparison, the CDP of $1.30\text{E-}6$ associated with the connection process is less than the CDP associated with a 7 day EDG outage (approximately $3.34\text{E-}6$) which is allowed by the PBNP Technical Specifications.

The frequency of the loss of off-site power at PBNP used in the PSA is 0.06 per year. The accident initiators that are most significantly affected by the connection process include; steam generator tube rupture, station blackout, loss of off-site power, transient without the power conversion system for cooling, loss of DC power source D-01, and loss of instrument air.

Some compensatory/contingency measures that would provide further reduction of the CDP associated with connection process were not factored into the PSA because of the difficulties associated with making such extreme changes to the model. These compensatory/contingency measures include restoration of power to Unit 2 Train B via a spare transformer from the 13.8 kV system to the new 2A06 bus that is being used during start-up testing of new EDG G-04, EDG G-04 could be started, and repairs which could include restoration of normal power to the Unit 2 Train B safeguards buses.

The results of the probabilistic safety assessment presented here show that the core damage probability for the connection process for 12 days is not significantly higher than the core damage

probability for the connection process for 7 days. Also, these PSA analysis results show that the connection process for 12 days results in a lower CDP than the CDP for a 7 day outage of one EDG.

Conclusion

The proposed Technical Specifications changes would allow the continued operation of PBNP Unit 1 for up to 5 days longer than the current allowed outage times of 7 days for standby emergency power and an electric motor driven auxiliary feedwater pump. These proposed changes are one-time extensions of the allowed outage times. This safety evaluation provides complete justifications for the continued safe operation of Unit 1 for up to 12 days while the connection of a new emergency diesel generator is in progress.

TECHNICAL SPECIFICATION CHANGE REQUEST 168
"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 against the standards of 10 CFR 50.92 and has determined that the operation of Point Beach Nuclear 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 Specifications will not create a significant increase in the probability or consequences of an accident previously evaluated.

The work being performed during the connection process will not increase the probability of an accident previously evaluated. The connection process involves work on the electrical distribution system at Point Beach. The work being performed is similar to other, previously performed, electrical distribution system maintenance activities and therefore, it will not cause an increase in the probability of electrical distribution system failures that could cause an accident.

The work being performed during the connection process will not create a significant increase in the probability of an accident previously evaluated. The consequences of the accidents previously evaluated in the PBNP FSAR are determined by the results of analyses that are based on initial conditions of the plant, the type of accident, transient response of the plant, and the operation and failure of equipment and systems.

The Technical Specification Limiting Conditions for Operation provide a temporary relaxation of the single failure criterion, consistent with overall reliability considerations, to allow time periods during which corrective action may be taken to restore the system to full operability. A situation that causes entry into an LCO usually creates an insignificant increase in the consequences of an accident.

The proposed extensions of allowed outage time durations for the LCOs being entered for the connection process cause a minor increase in the consequences of an accident because the affected equipment could be inoperable longer than current allowed outage time durations. The minor increase in

consequences is judged to be insignificant and commensurate with the increase in consequences that occur from entering other LCOs.

The use of the Alternate Shutdown System as the off-site power source for one Train B service water pump will allow sufficient service water pumps to remain operable to avoid entry into the service water LCO. The use of the Alternate Shutdown System as the off-site power source for one Train B service water pump does not increase the probability of an accident and allows the service water system to remain operable which maintains the status quo of the consequences of accidents previously evaluated.

2. Operation of this facility under the proposed Technical Specifications change will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed Technical Specifications change will allow the standby emergency power and electric motor driven auxiliary feedwater pump LCO allowed outage times to be extended from 7 to 12 days. This additional time will allow the safe continued operation of Unit 1 during the connection of one of the new emergency diesel generators at PBNP.

The proposed Technical Specifications change will not create the possibility of a new or different kind of accident from any accident previously evaluated, because entry into these LCOs is currently allowed by the PBNP Technical Specifications. Five days of additional allowed outage time for this equipment does not change the manner in which the affected equipment can fail such that a new or different kind of accident could occur.

Using the Alternate Shutdown System as the off-site power source for one Train B service water pump does not create the possibility of a new or different kind of accident from any accident previously evaluated because there are no known failure mechanisms of a service water pump powered in this manner that could cause any accident.

3. Operation of this facility under the proposed Technical Specifications change will not create a significant reduction in a margin of safety.

One aspect of margin of safety is redundancy. Many of the Technical Specifications Limiting Conditions for Operation provide a temporary relaxation of the single failure criterion, which is a relaxation of the redundancy requirement, consistent with overall reliability

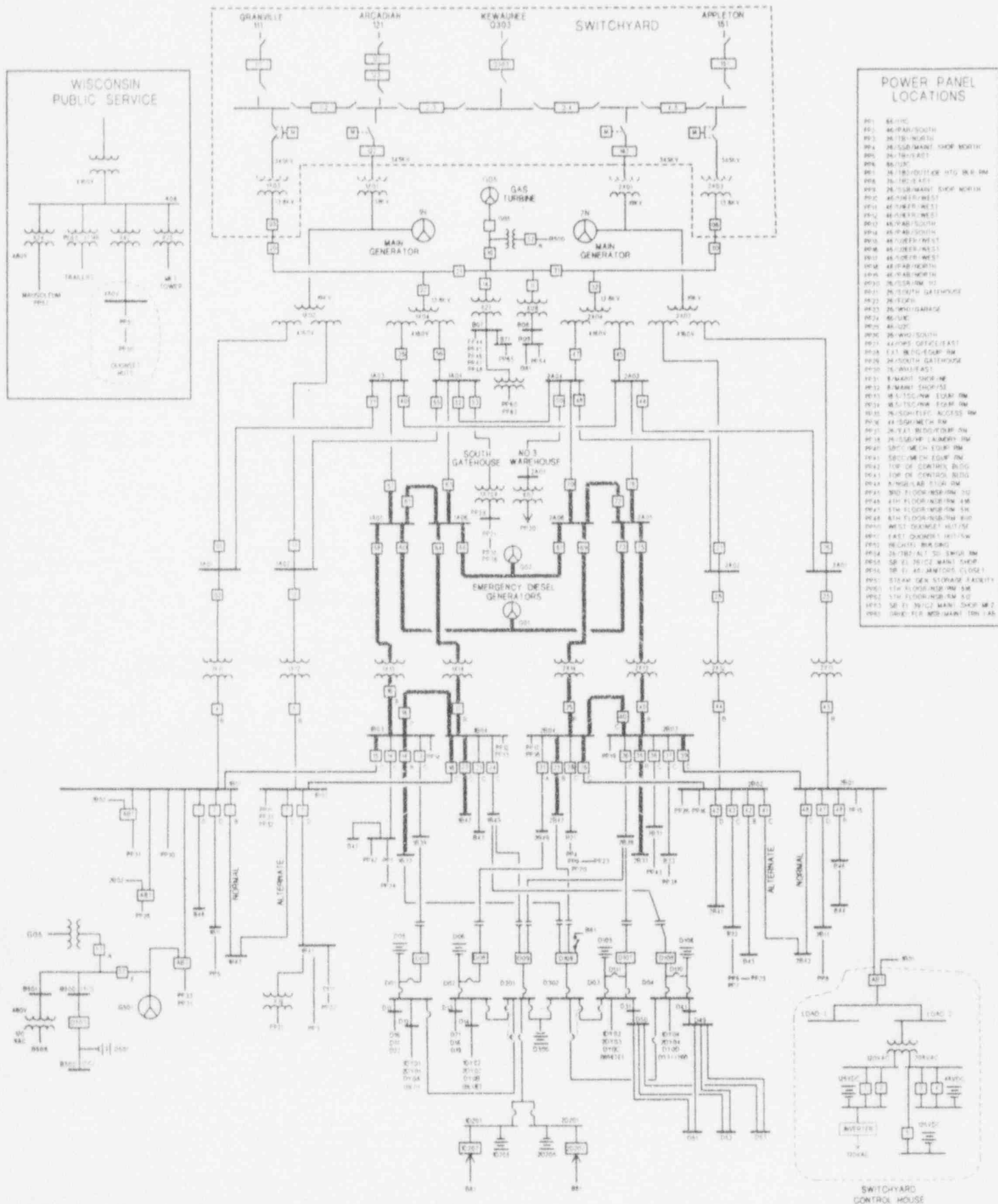
considerations, to allow time periods during which corrective action may be taken to restore the system to full operability.

The proposed allowed outage time extensions from 7 to 12 days for the standby emergency power and electric motor driven auxiliary feedwater pump LCOs are consistent with overall reliability considerations, to allow a time period during which this modification can be completed and the systems restored to full operability. Being in these two LCOs simultaneously is not a significant reduction in a margin of safety because the affected equipment is all in the same train. Full operability of the other train will be maintained during this LCO.

The results of the probabilistic safety assessment show that the core damage probability for this situation for 12 days is not significantly higher than the core damage probability for this situation for 7 days and the connection process for 12 days results in a lower CDP than the CDP for a 7 day outage of one EDG which is allowed by the PBNP Technical Specifications. This demonstrates that the proposed allowed outage time extensions are consistent with overall reliability considerations. Therefore, the proposed Technical Specifications change will not create a significant reduction in a margin of safety.

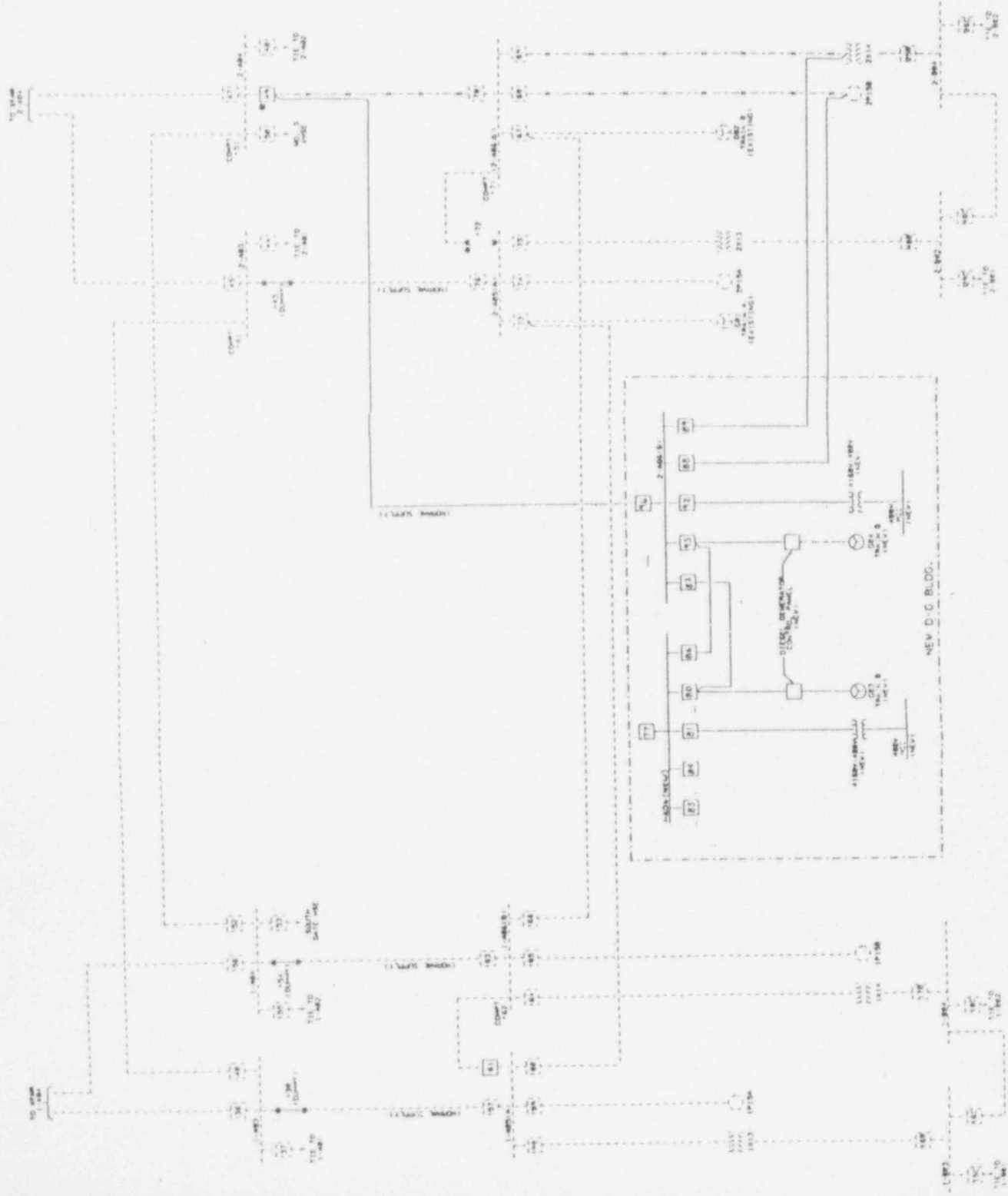
The use of the Alternate Shutdown System as the off-site power source for one Train B service water pump will allow sufficient service water pumps to remain operable to avoid entry into the service water LCO. This will maintain the required redundancy in the service water system and hence a significant reduction in a margin of safety will not be created.

ELECTRICAL DISTRIBUTION - INCLUDING DC



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PHASE 3A

LEGEND

- REPLACES EXISTING EQUIPMENT WITH IDENTICAL EQUIPMENT
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