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U. S. NUCLEAR REGULATORY COMMISSION
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Gentlemen:

DOCKETS 50-266 AND 50-301
ADDENDUM TO TECHNICAL SPECIFICATIONS CHANGE REQUEST 166
MODIFICATION TO TS 15.3.0-LIMITING CONDITIONS FOR OPERATION, 15.3.14-FIRE PROTECTION SYSTEM, 15.3.7-AUXILIARY ELECTRICAL SYSTEMS, AND 15.4.6-EMERGENCY POWER SYSTEM PERIODIC TESTS, POINT BEACH NUCLEAR PLANTS, UNITS 1 AND 2

In a letter dated May 26, 1994, we submitted Technical Specification Change Request 166. On June 7, 1994 a meeting between Wisconsin Electric and NRC was held to discuss this Technical Specification Change Request. This letter provides additional information regarding the issues discussed at this meeting.

CONSIDERATION FOR COMMON CAUSE FAILURES

Technical Specification change request 166 includes the following paragraph in the basis of TS 15.3.7:

> The LCOs for the standby emergency power supplies require the redundant standby emergency power supplies to be started within 24 hours of entry into these LCOs. If the standby emergency power supply LCO is exited within 24 hours, starting of the redundant standby emergency power supplies is not required.

In a meeting with the NRC on June 7, 1994, the NRC personnel stated that appropriate consideration for common cause failure must be included. The following revision to this paragraph is proposed:

> The LCOs for the standby emergency power supplies require the redundant standby emergency power supplies to be started within 24 hours of entry into these LCOs. If the standby emergency power supply LCO is exited within 24 hours, then the

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> starting of the redundant standby emergency power supplies is not required. If the LCO was entered due to a standby emergency power supply failure and the LCO was exited within 24 hours, then an evaluation must be completed within 24 hours of entry into the LCO to show that the redundant standby power supplies are not susceptible to a common cause failure or the redundant standby emergency power supplies must be started to prove that a common cause failure does not exist within 24 hours of entry into the LCO.

This change is a further clarification of the standby emergency power LCO. The safety evaluation for the original Technical Specification change request (166) has been reviewed and determined to be still applicable for this clarification. A mark-up of the Technical Specification page (15.3.7-7) that shows this change is attached.

TEST-MODE CHANGE-OVER TESTING

In the revision to the Design Summary pages that were sent with the Technical Specification Change Request 166, one of the changes deleted the "Test-Mode Change-over test." This was deleted because the control circuitry for the new emergency diesel generators, like that for the existing emergency diesel generators, does not include a test-mode change-over function as described in IEEE 387-1984. A description of how the control system responds to Safety Injection (SI) and Undervoltage (UV) signals is provided in an attachment to this letter.

Currently, it is not practical to change the design of the new or existing emergency diesel generator control systems to include the test-mode change-over capability. Further evaluations would need to be completed to determine if changing the EDG control systems to include this capability would be beneficial considering the complexity this capability would add.

The proper response of the control system to the SI and UV signals will be tested during start-up tests for each of the new emergency diesel generators. We have judged that this testing will satisfy the intent of the test-mode change-over testing guidance in Regulatory Guide 1.9, Revision 3. The revision to page 109 of the Design Summary describing the startup tests is also provided as an attachment to this letter.

MARGIN TESTS

IEEE 387-1984 guidance states that at least two margin tests shall be performed using either the same or different load arrangement. Two tests performed at the factory in December 1993 during refurbishment of the new EDGs are considered to be the tests that meet this guidance. One test was specifically performed as a margin test. The other test that meets the IEEE 387-1984 guidance for a margin test is the load profile test that was performed at the factory. The load profile for both of these tests (margin and load profile) included a load step at least 10% greater than the magnitude of the most severe single step load within the actual plant load profile.

One more margin test will be performed at the site in accordance with the guidance of Regulatory Guide 1.9, Revision 3. The two factory tests and one test at the site will complete the margin tests as described in sections 7.2.2 and 7.2.3 in the PBNP Diesel Generator Addition Project Design Summary.

INDEPENDENCE TESTING

In the revision to the Design Summary pages that were sent with Technical Specification Change Request 166, one of the changes (Appendix page D-4) showed that we would not comply with RG 1.41, "Preoperational Testing of Redundant On-site Electric Power Systems to Verify Proper Load Group Assignments."

Regulatory Guide 1.41 states:

> C. REGULATORY POSITION
>
> As part of the initial preoperational testing program, and also after major modifications or repairs to a facility, those on-site electric power systems designed in accordance with Regulatory Guides 1.6 and 1.32 (Safety Guides 6 and 32) should be tested as follows to verify the existence of independence among redundant on-site power sources and their load groups.
>
> (1) The plant electric power distribution system, not necessarily including the switchyard and the startup and auxiliary transformers, should be isolated from the off-site transmission network. Preferably, this isolation should be effected by direct actuation of the undervoltage-sensing relays within the on-site system.

(2) Under the conditions of C.1. above, the on-site electric power system should be functionally tested successively in the various possible combinations of power sources and load groups with all d-c and on-site a-c power sources for one load group at a time completely disconnected. Each test should include injection of simulated accident signals, startup of the on-site power source(s) and load group(s) under test, sequencing of loads, and the functional performance of the loads. Each test should be of sufficient duration to achieve stable operating conditions and thus permit the onset and detection of adverse conditions which could result from improper assignment of loads, e.g., the lack of forced cooling of a vital device.

(3) During each test, the d-c and on-site a-c buses and related loads not under test should be monitored to verify absence of voltage at these buses and loads.

During the June 7, 1994 meeting, we stated that the shared systems, especially DC power, prevent us from performing this testing, because of the safety effects on an operating unit. The independence of redundant on-site emergency power sources and their load groups will be maintained by using appropriate design and installation controls during each phase of this modification.

SITE ACCEPTANCE TESTING

In the revision to the Design Summary pages that were sent with the Technical Specification Change Request 166, one of the changes included adding the single load rejection, full load rejection, and endurance and margin tests to the site acceptance test list. These tests were listed with the note that we will perform portions or all of these tests. The word "portions" is not necessary and is being removed (see the attached Design Summary page 109 revision).

PROBABILISTIC SAFETY ASSESSMENT

In a letter dated June 30, 1993, Wisconsin Electric provided the response to Generic Letter 88-20, "Individual Plant Examination for Severe Accident Vulnerabilities, 10 CFR 50.54(f)" to the NRC. The individual plant examination for PBNP provided in that letter was a probabilistic safety assessment (PSA). Section 6.2 of the PSA is called "Plant Improvements." In that section, the addition of two new emergency diesel generators is briefly described. The PSA states:

> Additional EDGs: although not initiated as a result of the Point Beach IPE, a project to install a 3rd and 4th emergency diesel generator at PBNP is currently in the design and procurement phase. Construction of the new EDG building to house these EDGs recently started. The 3rd EDG is expected to be operational by the end of 1995. The completion of this project is roughly estimated to reduce the PBNP CDF (core damage frequency) by an additional 9 - 11%.

Currently, we are still evaluating the possibility of including the additional EDGs in the PSA models for PBNP.

FUEL OIL STORAGE

Technical Specification 15.3.7.A.1.f requires that a fuel oil supply of 11,000 gallons is available for the emergency diesel generators. The Technical Specification Basis for Section 15.3.7 states that this quantity of fuel oil provides sufficient fuel to operate one EDG at design load for more than 48 hours, with a fuel consumption rate of approximately 205 gallons per hour.

The original AEC Safety Evaluation for PBNP states, "Onsite fuel storage capacity is sufficient for a minimum of seven days' operation of the required safety feature loads which is acceptable." Prior to license amendments 148 for Unit 1 and 152 for Unit 2, the Technical Specification Basis for Section 15.3.7 stated that in addition to the 11,000 gallon supply in the emergency fuel oil tank, it will be normal for Point Beach to keep one, or the equivalent of one, bulk storage tank full at all times (55,000 gallons which is equal to about 10 days' supply). The PBNP FSAR continues to contain this information.

We believe that it would be appropriate to include the seven day fuel oil supply requirement in the Technical Specification Basis for Section 15.3.7. Therefore, we propose the following paragraph to be included in the Basis for Technical Specification 15.3.7:

> The original AEC Safety Evaluation for PBNP states, "Onsite fuel storage capacity is sufficient for a minimum of seven days' operation of the required safety feature loads which is acceptable." Therefore, to satisfy this requirement, at least 34,500 gallons of fuel oil will be maintained available for the emergency diesel generators at Point Beach at all times when EDG operability is required.

This change provides additional information about the requirements for fuel oil storage at Point Beach. The safety evaluation for the original Technical Specification change request has been reviewed and it has been determined that this information augments the safety evaluation in the original Technical Specification change request. A mark-up of the Technical Specification page (15.3.7-8) that shows this change is attached.

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

Sincerely,

Michael F Daumann for

Gary Krieser
Manager-Industry and Regulatory Services
Nuclear Power Business Unit

Enclosure

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

Subscribed and sworn before me on
this 11th day of July 1992.

Jacqueline Gorecki
Notary Public, State of Wisconsin

My commission expires 10-27-96.

TEST-MODE CHANGE-OVER TESTING

IEEE 387-1984, Section 5.5.2.2 states:

> **Automatic Control.** Upon receipt of a start-diesel signal, the automatic control system shall provide automatic startup and automatic adjustment of speed and voltage to a ready-to-load condition. (1) A start diesel signal shall override all other operating modes and return control of the diesel-generator unit to the automatic control system.

The EDG control system response to an SI or UV signal are evaluated for the three operating modes of concern as follows:

1. The EDG is running at idle speed.

   The EDG idle start circuitry automatically drops out and the engine runs up to the ready-to-load speed automatically. If the start signal was from an SI, the EDG will run until SI is cleared and manually shutdown. If the start was from an UV signal, the EDG will automatically reenergize the bus if the associated output breaker for that bus is in Automatic.

2. The EDG is running in the exercise mode and not synchronized to the bus.

   The EDG will continue to run at the same speed it was running at when the SI or UV start signal is received. It will be ready for automatic loading for UV.

3. The EDG is running in the exercise mode and synchronized to the bus.

   The EDG will continue to run at the synchronous speed of the bus to which it is connected. It will remain connected to that bus.

The EDG control system response will be tested in these modes.