



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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March 12, 1991

MEMORANDUM FOR: H. J. Miller, Acting Director
Division of Reactor Projects - R111

FROM: Bruce A. Boger, Director
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

SUBJECT: REVIEW OF REGION III CONCERN REGARDING TECHNICAL
SPECIFICATIONS COVERING DIESEL GENERATOR TESTING
(TAC NO. 77922)

Reference: Memorandum from E. G. Greenman, Region III, to
D. M. Crutchfield, NRR, dated October 22, 1990

By the referenced memorandum, Region III advised NRR of a series of diesel generator tests that failed to identify a degraded diesel generator at the Kewaunee Nuclear Power Plant (KNPP), and requested NRR assistance. The tests were purportedly conducted in accordance with KNPP Technical Specifications (TS), but did not involve loading the diesel generators. Consequently, the test results were not adequate to identify a diesel generator that may not have been capable of performing its intended function. Region III requested NRR to review the KNPP issue and determine what, if any, changes may be required to the KNPP TS, or to TS on a generic basis to preclude future occurrences of this type. The staff has reviewed the above request and supporting documentation, and provides comments as follows.

Concerning the KNPP TS, the existing specifications require loading the diesels to prove operability. The definition of Operability in Section 1.e of KNPP TS includes the requirement to test in accordance with Specification 4. Section 4.6 requires the diesels to be started and loaded to 2600 KW for 1 hour. There is nothing in KNPP Sections 3 or 4 with respect to demonstrating operability by starting and establishing rated speed and voltage only.

Concerning Standard TS (STS), the current Westinghouse STS require loading to demonstrate operability, as well. Some recently licensed plants, however, have a modified requirement to demonstrate diesel generator operability by starting and establishing only rated speed and voltage when a plant is in an LCO action due to a degraded ac power situation; i.e., loss of one offsite source, or loss of one diesel generator. The reason for not loading diesel generators when demonstrating operability under these conditions is to minimize the potential for failure due to grid transients when the plant is already experiencing a degraded ac condition.

The staff concludes that the licensee would have been in violation of the current standard Westinghouse Technical Specifications or the TS for recently licensed plants when on September 17, 1990, they failed to (1) conduct a loaded operability run on the 1A EDG following diesel generator maintenance as well as prior to removing the 1B EDG from service, and (2) conduct a loaded operability

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run on the 1B EDG prior to removing the 1A EDG from service. There are two reasons for this. First, operability must be reestablished following maintenance on a diesel generator by conducting a complete surveillance test, which was not done. Second, the 1A and 1B EDGs were tested prior to removing their redundant EDG from service, but not at load. Since there was no (known) degraded ac situation at the time, the tests to establish 1A and 1B EDG operability should have been at load.

The preceding is the staff's interpretation of the events at KNPP. Based on the referenced memorandum, however, it appears that there may be some confusion regarding just how to interpret the existing STS in this area. Therefore, we will review the existing STS as well as the new STS currently under development, to ensure that diesel generator testing under all conditions is adequately addressed. Also, we will consider issuing an Information Notice on this subject.

If you have any questions or require additional clarification, please contact Ed Tomlinson on extension x23150 or Mike Davis on extension X21390.

Original signed by John A. Zwolinski for

Bruce A. Boger, Director
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

- cc: C. Hehl, RI
- A. Gibson, RII
- S. Collins, RIV
- R. Zimmerman, RV
- E. Greenman
- G. Lafnas
- C. Grimes
- M. Virgilio

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run on the 1B EDG prior to removing the 1A EDG from service. There are two reasons for this. First, operability must be reestablished following maintenance on a diesel generator by conducting a complete surveillance test, which was not done. Second, the 1A and 1B EDGs were tested prior to removing their redundant EDG from service, but not at load. Since there was no (known) degraded ac situation at the time, the tests to establish 1A and 1B EDG operability should have been at load.

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