

ATTACHMENT I

CHANGES TO TECHNICAL SPECIFICATIONS

9807250160 880719
PDF ADOCK 05000369
P PDC

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 5) Verifying that on an ESF actuation test signal, without loss-of-offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be at least 4160 volts and 57 Hz within 11 seconds after the auto-start signal; the steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test;
- 6) Simulating a loss-of-offsite power in conjunction with an ESF actuation test signal, and
 - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses;
 - b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 11 seconds, energizes the auto-connected emergency (accident) loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test; and
 - c) Verifying that all automatic diesel generator trips, except engine overspeed, lube oil pressure, ~~and generator differential~~ are automatically bypassed upon loss of voltage on the emergency bus concurrent with a Safety Injection Actuation signal. ~~Additionally, all diesel generator breaker trips, except generator time overcurrent, are verified to be automatically bypassed upon concurrent loss of voltage on the emergency bus and a Safety Injection Actuation signal.~~
- 7) Operating for one hour at 4000 kW to achieve temperature stability. Within 5 minutes, restart and perform Surveillance Requirement 4.8.1.1.2e.6)b).
- 8) Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4400 kW and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 4000 kW. The generator voltage and frequency shall be at least 4160 volts and 57 Hz within 11 seconds after the start signal. The steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test.

AND GENERATOR
TIME
OVERCURRENT

ATTACHMENT II

JUSTIFICATION AND SAFETY ANALYSIS

Technical Specification 4.8.1.1.2.e.6(c) requires that all automatic diesel generator (D/G) trips, except engine overspeed, lube oil pressure, and generator differential; and all generator breaker trips, except generator time overcurrent, are automatically bypassed in the event of a concurrent loss of voltage on the emergency bus and safety injection actuation signal. The purpose of this specification is to prevent spurious trips of the D/G during emergency situations, while at the same time protecting the D/G from damage. This change will retain the same four diesel trip functions.

The current specification is impossible to meet because of the distinction between diesel trips and breaker trips. The first sentence requires that all but three diesel trip functions be verified to be bypassed, when in fact there is a fourth trip function, generator time overcurrent, which is not bypassed. In the second sentence all breaker trips are required to be bypassed except time overcurrent. However, generator differential is a second breaker trip (as well as a diesel trip) which by the first sentence is required to be operable.

The generator time overcurrent trip was added to the Technical Specifications in February, 1985 (Amendment 38 for Unit 1 and 19 for Unit 2). As approved, the trip was categorized as a breaker trip, and not a diesel trip. In an apparent effort to clarify the distinction, a clause was added to the original specification to require that all generator breaker trips except generator time overcurrent be bypassed. In actual fact, however, the time overcurrent trip function trips both the breaker and the diesel; hence, the trip should be simply included as a fourth diesel trip.

The requirement to verify the bypassing of generator breaker trips is beyond the requirements of standard technical specifications and is not required to protect the D/G. The consequences of eliminating the verification of trip bypass, would not significantly increase the likelihood of a spurious trip of a breaker. The redundancy of the D/Gs and the 125 VDC Vital Battery System will ensure that essential equipment remains energized. In the case of the generator time overcurrent trip, the diesel is tripped as well as the breaker. Thus, generator time overcurrent should remain in technical specifications as a diesel trip.

Surveillance tests that have been performed since the February 1985 license amendment have demonstrated the correct functioning of all diesel generator trips. This testing has demonstrated that the diesel generator protective trips would function as intended; therefore, the diesel generators are considered operable.

This proposed change will maintain the intent of a previously-approved amendment to McGuire's Facility Operating License. The four diesel trip functions will be maintained, and no adverse safety implications are created.

ATTACHMENT III

This analysis is presented in accordance with 10 CFR 50.91 to show that the proposed amendment does not involve a significant hazards consideration (SHC), as defined by the criteria of 10 CFR 50.92.

1. The proposed amendment will not involve a significant increase in the probability or consequences of any accident previously evaluated.

The proposed amendment does not affect any structure, systems, or components whose failure would result in an accident. The elimination of the requirement to verify the bypassing of breaker trips will not have a significant effect on the consequences of any accident. The failure of a breaker trip function to be bypassed could result in the affected bus being disconnected from its D/G for a short period of time. However, the redundancy of the diesels and the 125 VDC vital battery system are sufficient to ensure that power to essential equipment is not lost. Additionally, in the event of a spurious trip, the bus can be manually reconnected to the D/G.

2. The proposed amendment will not create the possibility of a new accident not previously evaluated.

The proposed amendment will not affect any structures, systems, or components which could create an accident or change the scenario of a previously evaluated accident to a new one. A breaker failure, or trip, is within the design basis of the station.

3. No margin of safety will be significantly reduced.

This change is essentially an administrative one, to correct the wording to reflect the intent of the previously approved Amendments 38 and 19 (Units 1 and 2, respectively). The addition of the generator time overcurrent trip was found acceptable by the staff in February, 1985, and in that respect is unchanged. The change will also eliminate from Technical Specifications some breaker trip bypass surveillances. It is Duke's position that these surveillances are not required in Technical Specifications. In support of this position, it is noted that standard technical specifications do not require breaker trip bypass surveillances. In addition, the corresponding Catawba Specification does not require trip bypass assurance for these breakers.

In summary, it is concluded that the proposed amendment does not create a significant hazards consideration, but rather fulfills the original intent of previously-approved amendments (38 and 19) to McGuire's Operating License.

ATTACHMENT IV

Duke hereby requests that this proposed technical specification revision be considered by NRC to be an emergency request. Pursuant to 10 CFR 50.91(a)(5), the following information in support of this request is provided:

Why this emergency situation occurred -

This situation occurred during the course of reviewing procedures for diesel generator surveillance. On July 15, 1988 it was determined that the surveillance procedures for the diesel generators were not in compliance with McGuire Technical Specification 4.8.1.1.2.e.6(c). Further review of the situation determined that appropriate surveillances had been done to verify the correct operation of the diesel generator trips as intended by the above referenced Technical Specification. Therefore, the diesels are considered to be operable, even though literal compliance with the Technical Specification cannot be achieved.

The result of this inability to achieve literal compliance with the specification would have resulted in a required shutdown of Unit 1 and Unit 2 would have had to remain in Mode 5 (Col. Shutdown) had not Duke received a waiver of compliance from the NRC Staff. This waiver was transmitted verbally on July 15, 1988. This waiver of compliance will be effective until July 22, 1988; at which time both units will be required to be shut down if this Technical Specification is not approved.

Why Duke could not avoid this situation -

This situation inadvertently occurred despite multiple reviews of the specification by both Duke and NRC since its initial proposed revision was submitted August 31, 1984.

This initial submittal (copy attached) includes the phrase "all automatic diesel generator and diesel generator breaker trips". Subsequently, in response to a staff request for clarification, Duke submitted a proposed change October 4, 1984. In an attempt to clarify the specification, Duke inadvertently created an incorrect specification. NRC approved this proposal in February 1985.

A subsequent revision to this specification (Amendments 71, 52), resulted in editorial changes to clarify the requirement. Again, despite multiple reviews, the initial incorrect requirement was not identified.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 5) Verifying that on an ESF actuation test signal, without loss-of-offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be at least 4160 volts and 57 Hz within 11 seconds after the auto-start signal; the steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test;
- 6) Verifying that on a simulated loss of the diesel generator, with offsite power not available, the loads are shed from the emergency busses and that subsequent loading of the diesel generator is in accordance with design requirements;
- 7) Simulating a loss-of-offsite power in conjunction with an ESF actuation test signal, and
 - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses;
 - b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 11 seconds, energizes the auto-connected emergency (accident) loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test; and
 - c) Verifying that all automatic diesel generator and diesel generator breaker trips, except engine overspeed, lube oil pressure, generator differential, and generator time over-current, are automatically bypassed upon loss of voltage on the emergency bus concurrent with a Safety Injection Actuation signal.
- 8) Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4400 kW and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 4000 kW. The generator voltage and frequency shall be at least 4160 volts and 57 Hz within 11 seconds after the start signal. The steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test. Within 5 minutes after completing this 24-hour test, perform Specification 4.8.1.1.2d.7)b);

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 5) Verifying that on an ESF actuation test signal, without loss-of-offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be at least 4160 volts and 57 Hz within 11 seconds after the auto-start signal; the steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test;
- 6) Verifying that on a simulated loss of the diesel generator, with offsite power not available, the loads are shed from the emergency busses and that subsequent loading of the diesel generator is in accordance with design requirements;
- 7) Simulating a loss-of-offsite power in conjunction with an ESF actuation test signal, and
 - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses;
 - b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 11 seconds, energizes the auto-connected emergency (accident) loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady-state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test; and
 - c) Verifying that all automatic diesel generator trips except engine overspeed, lube oil pressure, and generator differential, and all diesel generator breaker trips, except generator time overcurrent, are automatically bypassed upon loss of voltage on the emergency bus concurrent with a Safety Injection Actuation signal.
- 8) Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4400 kW and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 4000 kW. The generator voltage and frequency shall be at least 4160 volts and 57 Hz within 11 seconds after the start signal. The steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and 60 ± 1.2 Hz during this test. Within 5 minutes after completing this 24-hour test, perform: Specification 4.8.1.1.2d.7)b);