Attachment 1

Proposed Amendments to McGuire Units 1 and 2
Technical Specifications Concerning the
Surveillance Interval for Certain Diesel Generator Tests

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

b) A kinematic viscosity @ 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes, and

c) A specific gravity as specified by the manufacturer @ 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89 or an API gravity @ 60°F of greater than or equal to 27 degrees but less than or equal to 39 degrees.

2) Within 7 days after obtaining the sample, verify an impurity level of less than 2 mg of insolubles per 100 ml when tested in accordance with ASTM-D2274-70; and

3) Within 14 days of obtaining the sample verify that the other properties specified in Table 1 of ASTM-D975-77 and Regulatory Guide 1.137, Revision 1, October 1979, Position 2.a., are met when tested in accordance with ASTM-D975-77.

d. During each shutdown for refueling ~~At least once per 18 months, during shutdown,~~ by:

1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service;

2) Verifying the generator capability to reject a load of greater than or equal to 576 kW while maintaining voltage at 4160 ± 420 volts and frequency at 60 ± 1.2 Hz;

3) Verifying the generator capability to reject a load of 4000 kW without tripping. The generator voltage shall not exceed 4784 volts during and following the load rejection;

4) Simulating a loss-of-offsite power by itself, and:

a) Verifying deenergization of the emergency busses and load shedding from the emergency busses, and

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 blackout loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the blackout 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.

Justification and Safety Analysis

Technical Specification 4.8.1.1.2.d requires that at least once per 18 months, during shutdown, the diesel generator is started with a simulated loss-of-offsite power and energizes the auto-connect loads through the load sequencer. This test is required with and without a concurrent ESF actuation signal. These requirements are met by periodic test PT/1(or 2)/A/4200/09A, ESF Acutation Periodic Test, scheduled every 18 months.

The deadline for performing the next test on Unit 1 is October 27, 1983. This will involve a special outage lasting about 1½ weeks. The proposed amendments would change the requirement to "During each shutdown for refueling..." This would allow delaying the test about 3 months until the next refueling outage scheduled for January, 1984. It would also allow future tests to be scheduled based upon refueling outage schedules rather than calendar months.

Since the test must be performed with the unit in cold shutdown, it was intended to be performed each refueling outage. On McGuire Unit 1 the test was originally performed in March, 1980, in preparation for initial operation. Since initial criticality did not occur until August, 1981, the test was again completed in December, 1981 during an extended outage for steam generator inspection. This was intended to realign performance of the test with the expected refueling outage in 1983. However, delays in completing the steam generator modifications during an outage this summer delayed the first refueling outage until early 1984. Currently this scheduled refueling is beyond the maximum of 22½ months (18 months + 25% extension per Specification 4.0.2) allowed between individual tests.

Performance of the test on the two previous occasions was successful with no major problems noted. All major components actuated and the diesel generator performed the load sequence within required tolerances. Also it should be noted that individual component testing demonstrates operability on a frequency generally less than 18 months. As an example, all valves are response-time-tested on a more frequent basis. Based on previous testing we see no basis for questioning the ability of the diesel generators to perform their function in an integrated mode if the next test is performed at the first refueling outage in early 1984.

This integrated test should be performed during each refueling outage when the reactor vessel head is removed. This allows discharge of water to the reactor coolant system simulating actual conditions during an ESF actuation. During normal refueling cycles, this will involve performing the test more frequently than once per 18 months. The equilibrium refueling cycle for McGuire Units 1 and 2 is 274 Effective Full Power Days (EFPD). Assuming a less-than-expected capacity factor of 60%, this will be equivalent to 457 calendar days or about 15 months.

Therefore, Technical Specification 4.8.1.1.2.d should be changed to read "During each shutdown for refueling...". During a normal refueling cycle this would not exceed the time currently allowed and in the present case the additional time between tests of approximately 3 months beyond the currently allowed time is of no consequence to plant safety.

If the proposed change is considered unacceptable, Duke requests, as an alternative, that a one-time extension of the surveillance interval be granted for McGuire Unit 1. The surveillance interval would be extended until startup after the refueling outage at the end of Cycle 1A with a (proposed) expiration date of March 31, 1984.

Analysis of Significant Hazards Considerations

This analysis is provided as required by 10 CFR 50.91:

The effects of the proposed amendments would be an increase in the current surveillance interval for diesel generator testing and an expected decrease in future surveillance intervals. Thus, the effects relative to safety tend to be offsetting. Also, the expected increase in the current surveillance interval is small relative to the surveillance interval already approved, i.e. 3 months vs. 22½ months. If the proposed alternative change is made, the maximum length of the extension would be approximately 5 months, which is also small relative to 22½ months. Surveillance performed in March, 1980 and December, 1981 demonstrated the operability of the Unit 1 diesel generators. Therefore, the proposed amendments would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendments do not create the possibility of a new or different kind of accident because no changes in operating conditions are proposed. The proposed amendments do not involve a significant reduction in a margin of safety because no changes in any accident analyses are proposed.

Therefore, according to the standards of 10 CFR 50.92, the proposed amendments do not involve a significant hazards consideration.

Attachment 2

Proposed Amendments to McGuire Units 1 and 2
Technical Specifications Concerning the
Turbine Overspeed Protection System

INSTRUMENTATION

3/4.3.4 TURBINE OVERSPEED PROTECTION

LIMITING CONDITION FOR OPERATION

3.3.4 At least one Turbine Overspeed Protection System shall be OPERABLE.

APPLICABILITY: MODE 1.

ACTION:

a. With one stop valve or one governor valve per high pressure turbine steam lead inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam lead inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours, or close at least one valve in the affected steam lead(s) or isolate the turbine from the steam supply within the next 6 hours.

b. With the above required Turbine Overspeed Protection System otherwise inoperable, within 6 hours isolate the turbine from the steam supply.

SURVEILLANCE REQUIREMENTS

4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required Turbine Overspeed Protection System shall be demonstrated OPERABLE:

a. At least once per 31 days by cycling each of the following valves through at least one complete cycle from the running position:

   1) Four high pressure turbine stop valves,

   2) Four high pressure turbine governor valves,

   3) Six low pressure turbine reheat stop valves, and

   4) Six low pressure turbine reheat intercept valves.

b. At least once per 31 days by direct observation of the movement of each of the above valves through one complete cycle from the running position,

c. At least once per 18 months by performance of a CHANNEL CALIBRATION on the Turbine Overspeed Protection System, and

d. At least once per 40 months by disassembling at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion.

Justification and Safety Analysis

The proposed amendments would change Specification 4.3.4.2.a so that cycling the turbine valves would be required at least once per 31 days instead of 7 days. The change is justified by the excellent surveillance history on McGuire Unit 1 and by the significant burden involved in performing this surveillance. Also, the proposed change is consistent with the recommendations of Westinghouse, the manufacturer.

Each turbine valve has been tested 66 times so far on Unit 1 with no failures. The Unit 2 valves have been tested about ten times with no failures. (Note that the Unit 2 valves are identical in design to the corresponding Unit 1 valves.) This surveillance history indicates that the McGuire valves are reliable and can be tested less frequently with substantial confidence in their ability to function.

Cycling the turbine valves imposes a significant burden on plant operations in that unit output is reduced about 10% during the tests. Reducing the frequency of testing is, therefore, desirable. Additionally, turbine valve testing is believed to be a significant contributor to tube degradation in moisture separator reheaters.

Analysis of Significant Hazards Consideration

The following analysis is provided as required by 10 CFR 50.91:

Because previous surveillance has demonstrated with substantial confidence that the valves in the Turbine Overspeed Protection System will perform their intended function, the proposed change to relax the surveillance frequency would not involve a significant increase in the probability or consequences of an accident previously evaluated.

Since the proposed amendments do not involve changes in operating conditions nor accident analyses, the possibility of a new and different kind of accident is not created.

The proposed amendments do not involve a significant decrease in a safety margin because no accident analyses are affected.

The Commission has provided guidance concerning the application of standards of no significant hazards determination by providing certain examples (48 FR 14870). One of the examples (iv) relates to granting relief upon demonstration of acceptable operation from an operating restriction.

Although the testing is not in itself an operating restriction, the testing creates operating restrictions. These restrictions may be relaxed by requiring less frequent surveillance (consistent with manufacturers recommendation) without increasing the probability or consequences of an accident previously evaluated and without a significant reduction in existing safety margin, because prior testing has demonstrated acceptable operation of these turbine valves.

Therefore, the proposed amendments do not involve a significant hazards consideration according to the standards of 10 CFR 50.92.