



December 9, 1994

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Senior Vice President  
Nuclear

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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Washington, D.C. 20555

ULNRC-3114

Gentlemen:

DOCKET NUMBER 50-483  
CALLAWAY PLANT  
REVISION TO TECHNICAL SPECIFICATION 3/4.8.1  
A.C. SOURCES

Union Electric Company herewith transmits an application for amendment to Facility Operating License No. NPF-30 for Callaway Plant.

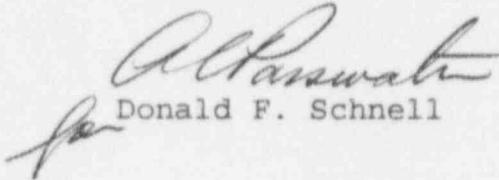
This amendment application proposes revising Technical Specification (T/S) Surveillance Requirement 4.8.1.1.2f.7 to remove the requirement to perform the hot restart within 5 minutes of completing the 24 hour test and place it in a separate T/S. This revision is based upon, in part, the guidance of Regulatory Guide 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electrical Power Systems at Nuclear Power Plants," Revision 3, NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," and NUREG-1431, "Standard Technical Specifications - Westinghouse Plants." The removal of the hot restart test from the 24 hour endurance test will allow it to be performed as a separate surveillance to demonstrate that the diesel engine can restart from a hot condition, such as subsequent to shutdown from surveillances, and achieve the required voltage and frequency within 12 seconds.

Attachments 1, 2, 3, and 4 contain the Safety Evaluation, the Significant Hazards Evaluation, the Environmental Consideration, and the Proposed Technical Specification Changes in support of this amendment request. This change request has been approved by the Callaway Onsite Review Committee and the Nuclear Safety Review Board.

ADD 1/1

If you have any questions concerning this matter, please contact me.

Very truly yours,

  
Donald F. Schnell

JMC/dls

Attachments: 1) Safety Evaluation  
2) Significant Hazards Evaluation  
3) Environmental Considerations  
4) Proposed Technical Specification Changes

STATE OF MISSOURI    )  
                              )    S S  
CITY OF ST. LOUIS    )

Alan C. Passwater, of lawful age, being first duly sworn upon oath says that he is Manager, Licensing and Fuels (Nuclear) for Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By *Alan C. Passwater*  
Alan C. Passwater  
Manager, Licensing and Fuels  
Nuclear

SUBSCRIBED and sworn to before me this 9th day  
of December, 1994.



*Deborah L. Anzalone*

DEBORAH L. ANZALONE  
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E210.01

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A140.001.002 (1163)

## SAFETY EVALUATION

### Proposed Change

This amendment request revises Technical Specification (T/S) Surveillance Requirement 4.8.1.1.2f.7 to remove the requirement to perform the hot restart within 5 minutes of completing the 24 hour test and place it in a separate T/S. This revision is based upon, in part, the guidance of Regulatory Guide 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electrical Power Systems at Nuclear Power Plants," Revision 3, NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," and NUREG-1431, "Standard Technical Specifications - Westinghouse Plants." The removal of the hot restart test from the 24 hour endurance test will allow it to be performed as a separate restart from a hot condition, such as subsequent to shutdown from surveillances, and achieve the required voltage and frequency within 12 seconds.

### Background

The current T/S surveillance requires the hot restart test to be performed within 5 minutes after completion of the 24 hour test. This test, as defined in Regulatory Guide (RG) 1.9, Revision 3, demonstrates the hot restart functional capability at full-load temperature conditions by verifying that the emergency diesel generator starts on a manual or auto-start signal, attains the required voltage and frequency within acceptable limits and time, and operates for longer than 5 minutes. It also states that this test may be performed following the 24 hour endurance test. The RG does not require the test to be performed in conjunction with the 24 hour test.

One reason for requesting this change is that separating these two tests gives plant operators added flexibility and prevents critical path complications during outages. By performing these tests in quick succession there is potential for causing critical path complications and delays during an outage. As a result of the testing sequence currently dictated by the technical specifications, a minimum of 48 hours of critical path time is spent each refueling outage running the two diesel generators and additional time is needed for the hot restart tests. By revising the surveillance requirements as requested, the 24 hour runs and hot restarts could be completed during the outage at a more convenient time.

### Evaluation

The hot restart test is performed to verify that the diesel generator does not have, in any way, impaired performance following operation at full load or equilibrium temperature. Failure to restart when hot, or extended delay in restarting, is typically only experienced with small forced-air-cooled diesel

engines which, upon being tripped undergo a temperature rise transient. The larger diesel generators are water cooled and do not experience any significant temperature rise transients during operation or after shutdown, hence the hot restart test can be performed at any time after the diesel generator has been run at continuous rated load for a period long enough for the operating temperature to stabilize, which is approximately 1 to 2 hours.

The current T/S surveillance requirement is not contained in NUREG-1431, it allows the hot restart to be performed within 5 minutes of shutting down the diesel generator anytime after it has operated for at least 2 hours at full load conditions. NUREG-1431 Bases for this surveillance states the 2 hours minimum of operating at full load conditions prior to performing the hot restart surveillance is based on manufacturers recommendations for achieving hot conditions. However, Callaway Plant's diesel engine manufacturer does not state a minimum time requirement for achieving hot conditions, they suggest monitoring the engine exhaust and jacket water temperatures until operating temperatures have stabilized. Also in NUREG-1366, the NRC Staff recommends that utilities be permitted to change their T/S to separate the 24 hour test and the hot restart test if they propose doing so. The only requirement should be that the hot restart test is performed within 5 minutes of operating the diesel generator at its continuous rating for 2 hours or until operating temperatures have stabilized.

The proposed revision to T/S Surveillance Requirement 4.8.1.1.2f.7 to separate the hot restart test from the 24 hour test is consistent with the guidance provided in NUREG-1366 and NUREG-1431 and would allow more flexibility for scheduling the surveillance during outages. The proposed revision does not involve an unreviewed safety question because operation of Callaway Plant with this change would not:

- a) Increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the Safety Analysis Report. The proposed revision to the T/S will not adversely impact plant safety since the requirement to perform the hot restart test will still be implemented via a separate surveillance requirement that demonstrates the hot restart functional capability of the diesel generators.
- b) Create the possibility for an accident or malfunction of equipment of a different type than any previously evaluated in the Safety Analysis Report. There are no design changes being made that would create the possibility for an accident or malfunction of equipment. The performance capability of the emergency diesel generators will not be affected. The verification of the hot restart capability of the diesel generators will still be performed, only the timing of the performance will be changed to give plant operators added flexibility and prevent critical path complications during outages.

- c) Reduce the margin of safety as defined in the basis for any technical specification. The proposed revision to the T/S does not reduce the margin of safety assumed in any accident analysis. The diesel generators will still perform their intended safety function following a loss of offsite power, to achieve and maintain the plant in a safe shutdown condition.

#### Conclusion

Given the above discussions as well as those presented in the Significant Hazards Consideration, the proposed change does not adversely affect or endanger the health or safety of the general public or involve a significant safety hazard.

SIGNIFICANT HAZARDS CONSIDERATION

Proposed Change

This amendment request revises Technical Specification (T/S) Surveillance Requirement 4.8.1.1.2f.7 to remove the requirement to perform the hot restart within 5 minutes of completing the 24 hour test and place it in a separate T/S. This revision is based upon, in part, the guidance of Regulatory Guide 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electrical Power Systems at Nuclear Power Plants," Revision 3, NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," and NUREG-1431, "Standard Technical Specifications - Westinghouse Plants." The removal of the hot restart test from the 24 hour endurance test will allow it to be performed as a separate surveillance to demonstrate that the diesel engine can restart from a hot condition, such as subsequent to shutdown from surveillances, and achieve the required voltage and frequency within 12 seconds.

The proposed revision to T/S Surveillance Requirement 4.8.1.1.2f.7 to separate the hot restart test from the 24 hour test is consistent with the guidance provided in NUREG-1366 and NUREG-1431 and would allow more flexibility for scheduling the surveillance during outages. The proposed revision does not involve a significant hazards consideration because operation of Callaway Plant with this change would not:

- a) Involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed revision to the T/S will not adversely impact plant safety since the requirement to perform the hot restart test will still be implemented via a separate surveillance requirement that demonstrates the hot restart functional capability of the diesel generators.
- b) Create the possibility of a new or different kind of accident from any previously evaluated. There are no design changes being made that would create a new type of accident or malfunction and the method and manner of plant operation remain unchanged. The performance capability of the emergency diesel generators will not be affected. The verification of the hot restart capability of the diesel generators will still be performed, only the timing of the performance will be changed to give plant operators added flexibility and prevent critical path complications during outages.

- c) Involve a significant reduction in a margin of safety. There are no changes being made to the safety limits or safety system settings that would adversely impact plant safety. The diesel generators will still perform their intended safety function following a loss of offsite power, to achieve and maintain the plant in a safe shutdown condition.

Based on the above discussions, it has been determined that the requested Technical Specification change does not involve a significant increase in the probability or consequences of an accident or create the possibility of a new or different kind of accident or condition over previous evaluations; or involve a significant reduction in a margin of safety. Therefore, the requested license amendment does not involve a significant hazards consideration.

ENVIRONMENTAL CONSIDERATION

This amendment application revises the surveillance requirements of Technical Specification 4.8.1.1.2f.7 to remove the requirement to perform the hot restart within 5 minutes of completing the 24 hour test and places it in a separate technical specification that will allow it to be performed within 5 minutes of shutting down the diesel generator anytime after it has operated for at least 2 hours at full load conditions. These proposed changes are based on the guidance of Generic Letters 94-01 and 93-05, Regulatory Guide 1.9, Revision 3, NUREG-1366, and NUREG-1431.

The proposed amendment involves changes with respect to the use of facility components located within the restricted area, as defined in 10 CFR 20 and revises surveillance requirements. Union Electric has determined that the proposed amendment does not involve:

- (1) A significant hazards consideration, as discussed in Attachment 2 of this amendment application;
- (2) A significant change in the types or significant increase in the amounts of any effluents that may be released offsite;
- (3) A significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.