



October 6, 1993

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U.S. Nuclear Regulatory Commission
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Gentlemen:

ULNRC-2873

DOCKET NUMBER 50-483

CALLAWAY PLANT

REVISION TO TECHNICAL SPECIFICATIONS 3.8.3.1 and 3.8.3.2
ELECTRICAL POWER SYSTEMS - ONSITE POWER DISTRIBUTION

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

This amendment application changes the limiting conditions for operation for four emergency busses (NG05E, NG06E, NG07, and NG08) supplying power to the Essential Service Water System. This revision makes the limiting conditions consistent with the requirements of Technical Specification Section 3.7.4, Plant Systems - Essential Service Water System. These changes will result in increased operational flexibility and clarified requirements for electrical systems. This request also proposes minor editorial changes to nomenclature.

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.

Very truly yours,

Donald F. Schnell

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RMD/dls

Attachments: Attachment 1 - Safety Evaluation
Attachment 2 - Significant Hazards Evaluation
Attachment 3 - Environmental Consideration
Attachment 4 - Proposed Technical Specification Changes

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STATE OF MISSOURI)
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CITY OF ST. LOUIS)

Donald F. Schnell, of lawful age, being first duly sworn upon oath says that he is Senior Vice President-Nuclear and an officer of 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 Donald F. Schnell
Donald F. Schnell
Senior Vice President
Nuclear

SUBSCRIBED and sworn to before me this 6th day
of October, 1993.

Barbara J. Pfafe

BARBARA J. PFAFE
NOTARY PUBLIC—STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 22, 1997
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SAFETY EVALUATION

Proposed Changes

This license amendment request proposes a revision to Technical Specification Section 3.8.3, Electrical Power Systems - Onsite Power Distribution, to make the limiting conditions for operation for four emergency busses (NG05E, NG06E, NG07, and NG08) consistent with other technical specifications. Motor Control Centers (MCC) NG05E and NG06E supply power to only essential service water (ESW) system support equipment. Load Centers (LC) NG07 and NG08 also supply power to only ESW system support equipment, primarily the Ultimate Heat Sink (UHS) cooling tower. The proposed revision will make the allowed outage time (AOT) for any of these emergency busses 72 hours. This is equivalent to the AOT for one train of the ESW per Technical Specification 3.7.4 and equivalent to the AOT for one train of the UHS cooling tower per Technical Specification 3.7.5.

This amendment request also proposes an editorial change by removing the number sign (#) before each electrical bus, battery, and battery charger listed in Technical Specifications Section 3.8.3 in order to clarify the specifications and make the nomenclature consistent with other sections.

Background

The operability of the onsite A.C. power distribution system is required by the technical specifications in order to ensure sufficient power will be available to supply the safety-related equipment required for safe shutdown of the facility and for mitigating conditions resulting from postulated accidents. As shown in Figure 1, the onsite A.C. power distribution network contains two independent divisions of electrical busses. Each of these divisions, or load groups, consist of one 4160-volt A.C. emergency bus that feeds, via transformers, three 480-volt emergency load center busses, and one 480-volt emergency motor control center (MCC) bus. A more detailed drawing of the onsite power distribution is presented in the Callaway Final Safety Analysis Report (FSAR) Figure 8.3-1, Sheets 1 and 2.

Technical Specifications 3.8.3.1a and b require both divisions of the electrical busses described above to be operable during modes 1, 2, 3, and 4. During modes 5 and 6, Technical Specification 3.8.3.2 requires either division 1 or division 2 to be operable. These specifications include a listing of the specific busses in each division. The 480-volt A.C. emergency busses contained in the specifications include MCC NG05E in division 1 and MCC NG06E in division 2. These MCCs provide emergency power to only ESW system support equipment. The proposed revision allows the deenergization of MCC NG05E or MCC NG06E for up to 72 hours, which is equivalent to the allowed outage time for one train of the ESW system per Technical Specification 3.7.4.

This amendment request also proposes to add Load Centers NG07 and NG08 to the listing of emergency busses in Technical Specifications 3.8.3.1 and 3.8.3.2. These LCs provide emergency power to only the UHS cooling tower and other ESW support system equipment. The proposed addition would also allow the deenergization of LC NG07 or LC NG08 for up to 72 hours, which is equivalent to the allowed outage time for one train of the UHS cooling tower per Technical Specification 3.7.5. Thus, this change will provide consistency between the specifications for the ESW system and the emergency A.C. power distribution system.

Reason for Change

This technical specification change is proposed to remove inconsistencies between technical specification sections, to increase operational flexibility, and to clarify electrical system requirements. The subject 480-volt A.C. MCCs NG05E and NG06E are powered via transformers fed directly from the 4160-volt A.C. busses. The components powered from MCCs NG05E and NG06E are associated with the ESW system. MCC NG05E provides power to components and support systems (e.g., unit heater, standby lighting, self cleaning strainer, pump house supply fan, exhaust damper) for ESW train A. MCC NG06E provides power to the same components and support systems for ESW train B. (Note that the essential service water pumps themselves are powered directly from the 4160-volt emergency busses NB01 and NB02 and are not affected in any way by this change.) Technical Specification 3.7.4, Plant Systems - Essential Service Water System, provides specific limiting conditions for applicable ESW components supplied by the two MCCs.

The current eight hour limitation for the ESW MCCs in Technical Specification Section 3.8.3 leads to inconsistencies in technical specification requirements and imposes unnecessary constraints on plant operations. For example, should one train of the ESW system become inoperable, the action statement of Technical Specification 3.7.4 provides an allowable outage time of 72 hours. However, if MCC NG05E or MCC NG06E become inoperable, an allowable outage time of only eight hours is provided, even though the only components powered by these MCCs are within the respective trains or the support systems of the ESW system.

The addition of LCs NG07 and NG08 to the listing of required emergency busses, and the surveillances associated with them, will clarify the requirements imposed on electrical systems.

The proposed typographical revision is editorial in nature and will make the affected pages more consistent with other technical specifications.

Evaluation

The proposed changes to the Technical Specifications do not involve an unreviewed safety question because operation of the Callaway Plant with these changes would not:

1. 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 implementation of the proposed technical specification changes does not involve any modifications to the physical plant. Even though the MCCs themselves will have an allowed outage time of 72 hours instead of 8 hours, the operability requirements of the ESW system itself have not been lessened. The addition of LCs NG07 and NG08 to the technical specifications and surveillances serves to clarify the 480-volt power supply requirements in the technical specifications. The proposed changes do not affect accident initiators or assumptions. The radiological consequences of any accident previously evaluated remain unchanged.

2. Create the possibility for an accident or malfunction of a different type than any previously evaluated in the safety analysis report.

As noted above, the proposed change eliminates inconsistent requirements from the technical specifications, but overall does not lessen the requirements on ESW system operability imposed by the technical specifications. The implementation of the proposed technical specification changes does not involve any modifications to the physical plant or any significant change to the methods of operation of plant systems. The proposed changes do not create any new accident initiators.

3. Reduce the margin of safety as defined in the basis for any technical specifications.

The requirements of Technical Specification 3.7.4, Plant Systems - Essential Service Water System, provide specific limiting conditions for operation applicable to the ESW System. In accordance with the definition of operability contained in the technical specifications, the operability of the ESW MCCs has always been included within these requirements. The existing technical specification requirements for onsite A.C. power distribution systems are intended to assure the availability of A.C. power sources supplying multiple safety systems. The NG05E and NG06E MCCs identified by this proposed change provide power for a single safety system (ESW) and associated equipment. The use of the 72 hour limit for the ESW MCCs is consistent with the requirements of Regulatory Guide 1.93, "Availability of Electrical Power Sources" and has an insignificant impact on

the Callaway Probabilistic Risk Analysis. LCs NG07 and NG08 also only provide power for a single safety system (ESW) and associated equipment (UHS cooling tower). Since the technical specification requirements relative to the ESW system operability are not lessened by this change, there will be no reduction in the margin of safety as defined in the basis for the technical specifications.

On the basis of the above discussions and the considerations presented in the Significant Hazards Evaluation, the proposed changes do not adversely affect or endanger the health or safety of the general public or involve a significant safety hazard.

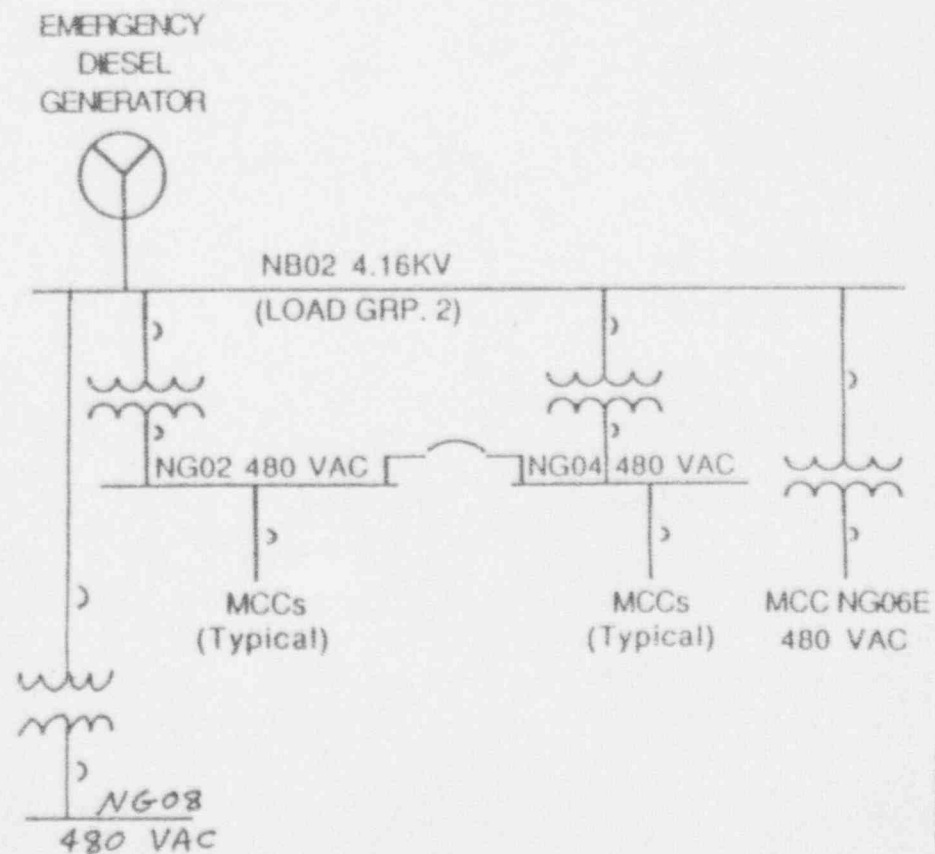
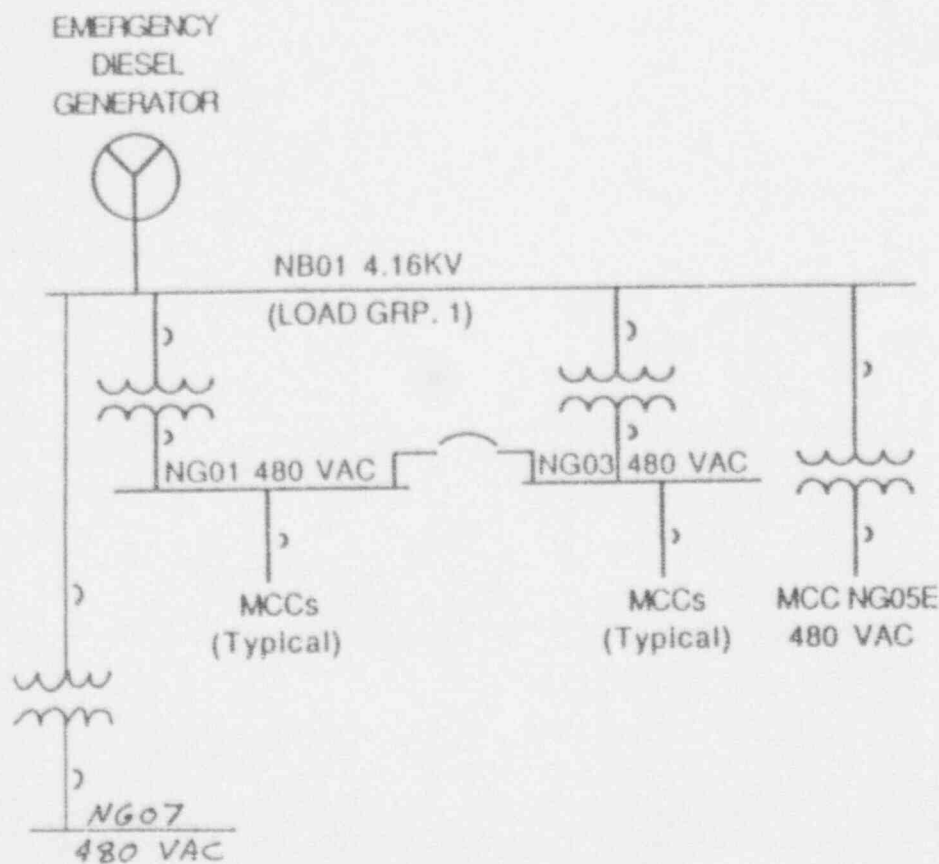


FIGURE 1 SAFETY-RELATED AC DISTRIBUTION SYSTEM

SIGNIFICANT HAZARDS EVALUATION

This license amendment request proposes a revision to Technical Specification Section 3.8.3, Electrical Power Systems - Onsite Power Distribution, to make the limiting conditions for operation for four emergency busses (NG05E, NG06E, NG07, and NG08) consistent with other technical specifications. Motor Control Centers (MCC) NG05E and NG06E supply power to only essential service water (ESW) system support equipment. Load Centers (LC) NG07 and NG08 also supply power to only ESW system support equipment, primarily the Ultimate Heat Sink (UHS) cooling tower. The proposed revision will make the allowed outage time (AOT) for any of these emergency busses 72 hours. This is equivalent to the AOT for one train of the ESW per Technical Specification 3.7.4 and equivalent to the AOT for one train of the UHS cooling tower per Technical Specification 3.7.5.

This amendment request also proposes an editorial change by removing the number sign (#) before each electrical bus, battery, and battery charger listed in Technical Specifications Section 3.8.3 in order to clarify the specifications and make the nomenclature consistent with other sections.

The proposed changes do not involve a significant hazards consideration because operation of Callaway Plant with these changes would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The implementation of the proposed technical specification changes does not involve any modifications to the physical plant. Even though the MCCs themselves will have an allowed outage time of 72 hours instead of 8 hours, the operability requirements of the ESW system itself have not been lessened. The addition of LCs NG07 and NG08 to the technical specifications and surveillances serves to clarify the 480-volt power supply requirements in the technical specifications. The proposed changes do not affect accident initiators or assumptions. The radiological consequences of any accident previously evaluated remain unchanged.

2. Create the possibility of a new or different kind of accident from any previously evaluated.

As noted above, the proposed change eliminates inconsistent requirements from the technical specifications, but overall does not lessen the requirements on ESW system operability imposed by the technical specifications. The implementation of the proposed technical specification changes does not involve any modifications to the physical plant or any significant change to the methods of operation

of plant systems. The proposed changes do not create any new accident initiators.

3. Involve a significant reduction in a margin of safety.

The requirements of Technical Specification 3.7.4, Plant Systems - Essential Service Water System, provide specific limiting conditions for operation applicable to the ESW System. In accordance with the definition of operability contained in the technical specifications, the operability of the ESW MCCs has always been included within these requirements. The existing technical specification requirements for onsite A.C. power distribution systems are intended to assure the availability of A.C. power sources supplying multiple safety systems. The NG05E and NG06E MCCs identified by this proposed change provide power for a single safety system (ESW) and associated equipment. The use of the 72 hour limit for the ESW MCCs is consistent with the requirements of Regulatory Guide 1.93, "Availability of Electrical Power Sources" and has an insignificant impact on the Callaway Probabilistic Risk Analysis. LCs NG07 and NG08 also only provide power for a single safety system (ESW) and associated equipment (UHS cooling tower). Since the technical specification requirements relative to the ESW system operability are not lessened by this change, there will be no reduction in the margin of safety as defined in the basis for the technical specifications.

As discussed, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated or create the possibility of a new or different kind of accident from any previously evaluated. These changes do not result in a significant reduction in a margin of safety. Therefore, it has been determined that the proposed changes do not involve a significant hazards consideration.

ENVIRONMENTAL CONSIDERATION

This license amendment request proposes a revision to Technical Specification Section 3.8.3, Electrical Power Systems - Onsite Power Distribution, to make the limiting conditions for operation for four emergency busses (NG05E, NG06E, NG07, and NG08) consistent with other technical specifications. Motor Control Centers (MCC) NG05E and NG06E supply power to only essential service water (ESW) system support equipment. Load Centers (LC) NG07 and NG08 also supply power to only ESW system support equipment, primarily the Ultimate Heat Sink (UHS) cooling tower. The proposed revision will make the allowed outage time (AOT) for any of these emergency busses 72 hours. This is equivalent to the AOT for one train of the ESW per Technical Specification 3.7.4 and equivalent to the AOT for one train of the UHS cooling tower per Technical Specification 3.7.5.

This amendment request also proposes an editorial change by removing the number sign (#) before each electrical bus, battery, and battery charger listed in Technical Specifications Section 3.8.3 in order to clarify the specifications and make the nomenclature consistent with other sections.

The proposed amendment involves a change to a requirement with respect to the use of a facility component located within the restricted area, as defined in 10 CFR 20. 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 assessment need be prepared in connection with the issuance of this amendment.