

WOLF CREEK

NUCLEAR OPERATING CORPORATION

Otto L. Maynard
Vice President Plant Operations

December 13, 1995

WO 95-0178

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Subject: Docket No. 50-482: Revision to Technical Specifications
3/4.8.2.1, 3/4.8.2.2, 3/4.8.3.1 and 3/4.8.3.2 - Electrical
Power Systems - D.C. Sources and Onsite Power Distribution

Gentlemen:

This letter transmits an application for amendment to Facility Operating License No. NPF-42 for Wolf Creek Generating Station (WCGS). This license amendment request proposes to revise the 125-volt D.C. Sources Technical Specifications (3.8.2.1 and 3.8.2.2) to include provisions for installed spare chargers, which will be added to the plant design during the next refueling outage. The Onsite Power Distribution Technical Specifications 3.8.3.1 and 3.8.3.2 would be revised to indicate that spare chargers may be connected in place of the primary chargers.

Attachment I provides a description of the proposed change along with a Safety Evaluation. Attachment II provides a No Significant Hazards Consideration Determination. Attachment III provides the Environmental Impact Determination. The specific changes to the technical specifications proposed by this request are provided as Attachment IV.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Kansas State official. This license amendment includes provisions for flexibility provided by installed spare battery chargers which are being added to the plant design during the eighth refueling outage scheduled for the Spring 1996. We request approval of this license amendment request prior to startup from eighth refueling outage. This proposed revision to the WCGS Technical Specifications will be implemented during the eighth refueling outage.

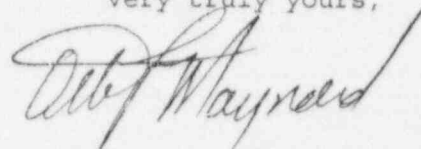
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If you have any questions concerning this matter, please contact me at (316) 364-8831, extension 4450, or Mr. Richard D. Flannigan, at extension 4500.

Very truly yours,



Otto L. Maynard

OLM/jra

Attachments: I - Safety Evaluation
II - No Significant Hazards Consideration Determination
III - Environmental Impact Determination
IV - Proposed Technical Specification Changes

cc: G. W. Allen (KDHE), w/a
L. J. Callan (NRC), w/a
W. D. Johnson (NRC), w/a
J. F. Ringwald (NRC), w/a
J. C. Stone (NRC), w/a

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Otto L. Maynard, of lawful age, being first duly sworn upon oath says that he is Vice President Plant Operations of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the content thereof; that he has executed that same for and on behalf of said Corporation 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 *Otto L. Maynard*
Otto L. Maynard
Vice President
Plant Operations

SUBSCRIBED and sworn to before me this 13 day of Dec. , 1995.

Denise A. Wilkins
Notary Public

Expiration Date 1/8/96

ATTACHMENT I
SAFETY EVALUATION

Safety Evaluation

Proposed Change

This license amendment request proposes a revision to the 125-volt D.C. Sources Technical Specifications 3.8.2.1 and 3.8.2.2 and the Onsite Power Distribution Technical Specifications 3.8.3.1 and 3.8.3.2.

The 125-volt D.C. Sources Technical Specifications 3.8.2.1 and 3.8.2.2 would be revised to include provisions for installed spare chargers which will be added to the plant design during the next refueling outage.

The Onsite Power Distribution Technical Specifications 3.8.3.1 and 3.8.3.2 would be revised to indicate that spare charger NK25 may be connected in place of charger NK21 or NK23 and charger NK26 may be connected in place of charger NK22 or NK24.

Plant Description

Figure 1 is a simplified drawing of the safety-related 125-volt D.C. system at Wolf Creek Generating Station. This figure shows the connections from the two 4160-volt A.C. Emergency Busses (NB01 and NB02) through the four 480-volt A.C. Emergency Busses (NG01/NG03, NG02/NG04). The NG busses supply power to the four full capacity chargers (NK21/NK23, NK22/NK24). Each charger supplies a Class 1E 125-volt D.C. bus (NK01, NK03, NK02, and NK04) and an associated 125-volt battery bank (NK11, NK13, NK12, or NK14).

Class 1E D.C. Power System

The power block D.C. power system consists of four independent Class 1E 125-volt D.C. subsystems, four non-Class 1E 125-volt D.C. subsystems, and one non-Class 1E 250-volt D.C. system. The D.C. power system is designed to provide reliable and continuous power for controls, instrumentation, inverters, and D.C. emergency auxiliaries.

The Class 1E D.C. system provides D.C. electric power to the Class 1E D.C. loads and for control and switching of the Class 1E systems. Physical separation, electrical isolation, and redundancy are provided to comply with the requirements of IEEE Standard 308. The four Class 1E D.C. power subsystems are shown in Figure 8.3-6, Sheet 1, of the Updated Safety Analysis Report (USAR). Subsystems 1 and 4 provide control power for A.C. Load Groups 1 and 2, respectively. These subsystems also provide vital instrumentation and control power for channels 1 and 4, respectively, of the reactor protection and engineered safety features systems. D.C. subsystems 2 and 3 provide vital instrumentation and control power for channels 2 and 3, respectively, of the reactor protection and engineered safety features systems. Each Class 1E D.C. power subsystem consists of one 125-volt battery, one battery charger, one inverter, and distribution switchboards. The battery chargers for D.C. subsystems 1 and 3 are supplied 480-volt A.C. power from different Class 1E busses of Load Group 1. Similarly, the battery chargers for D.C. subsystems 2 and 4 are supplied 480-volt A.C. power from different

Class 1E busses of Load Group 2. The inverters provide four independent 120-volt A.C. vital instrumentation and control power supplies for the channels of reactor protection and engineered safety features systems.

Currently, one spare battery charger and one spare inverter are provided for the power block. These items are physically located central to all of the Class 1E D.C. systems. They are not, however, electrically connected. In the event of the failure of a charger or inverter, the spare is manually connected to the affected system. Therefore, the malfunctioning equipment may be repaired without imposing long-term disruption of the system. A design change to be implemented during the eighth refueling outage to permanently install seismically qualified spare chargers is described below.

Eighth Refueling Outage Modifications

The modification to be implemented during the eighth refueling outage will provide permanently installed spare chargers for the 125-volt D.C. system (Reference Figure 2).

The current spare battery charger will be permanently installed as a spare swing charger for the 125-volt D.C. Busses NK01 and NK03. A new charger will be installed as a spare swing charger for 125-volt D.C. Busses NK02 and NK04. Each Class 1E D.C. power subsystem will then consist of one 125-volt battery, one primary battery charger, one inverter, distribution switchboards, a shared swing battery charger, and swing battery charger transfer switches. The battery chargers for D.C. subsystems 1 and 3 will be supplied 480-volt A.C. power from different Class 1E busses of Load Group 1 while their shared swing battery charger will be supplied 480-volt A.C. power from either a Class 1E bus of Load Group 1 or a Non-class 1E bus from Separation Group 5. Similarly, the battery chargers for D.C. subsystems 2 and 4 will be supplied 480-volt A.C. power from different Class 1E busses of Load Group 2 while their shared swing battery charger will be supplied 480-volt A.C. power from either a Class 1E bus of Load Group 2 or a Non-class 1E bus from Separation group 6.

Two swing battery charger subsystems will be provided for the Class 1E D.C. power subsystems. One for use with Class 1E D.C. subsystems 1 and 3 and the other for use with Class 1E D.C. subsystems 2 and 4, permanently connected to their respective Class 1E D.C. power subsystems via manually controlled, electrically operated, transfer switches. In the event of a failure of a primary battery charger, the respective swing battery charger can be quickly aligned to provide power to the affected D.C. power subsystem. Therefore, the malfunctioning equipment may be repaired without imposing long-term disruption of the system. Once the swing battery charger is aligned to a given D.C. power subsystem all of the required annunciated trouble conditions are monitored on the swing charger and an annunciator window on the main control boards is lit to alert the control room staff that a swing charger is in use.

The batteries, racks, chargers, inverters, and auxiliary distribution equipment (switchboards and transfer switches) are designated seismic Category 1, and are designed to maintain their functional capability during and after an SSE. This modification is being done under the provisions of 10CFR50.59. The modification will allow 125-volt D.C. power to be supplied from the installed spare chargers within the Technical Specification 3.8.2.1 and

3.8.2.2 allowed outage time of 2 hours. The current design does not allow this switchover to be completed within 2 hours.

Detailed Description of Proposed Technical Specification Changes

- Technical Specification 3/4.8.2.1 - D.C. Sources - Operating

The Limiting Condition for Operation would be modified to include installed full-capacity spare charger NK25 in part a). Part b) would be modified to include installed full capacity spare charger NK26. The spare chargers would be added to the Limiting Condition for Operation to allow for the flexibility provided by the modifications being implemented during the next refueling outage. The spare chargers will be installed such that each one can only supply one bus at a time from their respective safety-related bus, NG01 for charger NK25 and NG04 for charger NK26. Alternate A.C. nonsafety-related electrical feeds to spare battery chargers NK25 and NK26 will be provided for maintenance purposes only during safety-related A.C. train outages. The chargers are equivalent to those in present design. They are seismic Category I and meet separation criteria by use of appropriate isolation devices. Control Building heat load and air conditioning calculations have been revised to reflect the new spare swing battery charger and transfer switch installation. The air conditioning system capacity is capable of cooling the additional heat loads.

Surveillance Requirement 4.8.2.1 would be revised to clarify that the surveillance is only applicable for the 125 volt battery bank and connected charger.

- Specification 3/4.8.2.2 - D.C. Sources - Shutdown

The Limiting Condition for Operation would be modified to address the spare chargers, as described above for Technical Specification 3/4.8.2.1.

Surveillance Requirement 4.8.2.2 would be revised to clarify that the surveillance is only applicable for the 125 volt battery banks and connected chargers.

- Technical Specification 3/4.8.3.1 - Onsite Power Distribution - Operating
- Technical Specification 3/4.8.3.2 - Onsite Power distribution - Shutdown

Both specifications would be modified to indicate that spare charger NK25 may be connected in place of charger NK21 or NK23 and spare charger NK26 may be connected in place of charger NK22 or NK24.

Evaluation

The proposed changes do not involve an unreviewed safety question because operation of Wolf Creek Generating Station in accordance with these changes would not:

- 1) Involve a significant increase in the probability of occurrence or the consequence of an accident or malfunction of equipment important to safety previously evaluated in the USAR. These proposed technical specification changes do not alter the plant design bases nor do they involve any hardware changes that significantly increase the probability of any event initiators. There will be no change to normal plant operating parameters or accident mitigation capabilities. There will be no increase in the consequences of any accident or equipment malfunction.
- 2) Create the possibility for accident or malfunction of equipment of a different type than previously evaluated in the USAR. The proposed technical specification changes do not involve any design bases changes nor are there any changes to the method by which any safety-related plant system performs its safety function. The normal manner of plant operation is unaffected. No new accident scenarios, transient precursors, failure mechanisms, or limiting single failures are introduced as a result of these changes.
- 3) Involve a reduction in the margin of safety as defined in the basis for any technical specification. There will be no affect on the manner in which safety limits or limiting safety system settings are determined, nor will there be any effect in those plant systems necessary to assure the accomplishment of protection functions. There will be no impact on DNBR limits, F_0 , F-delta-H, LOCA PCT, peak local power density or any other margin of safety.

Based on the above discussions and the considerations presented in Attachment II, the proposed change does not 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; or create a possibility for an accident or malfunction of a different type that any previously evaluated in the safety analysis report; or reduce the margin of safety as defined in the basis for any technical specification. Therefore, the proposed change does not adversely affect or endanger the health or safety of the general public or involve a significant safety hazard.

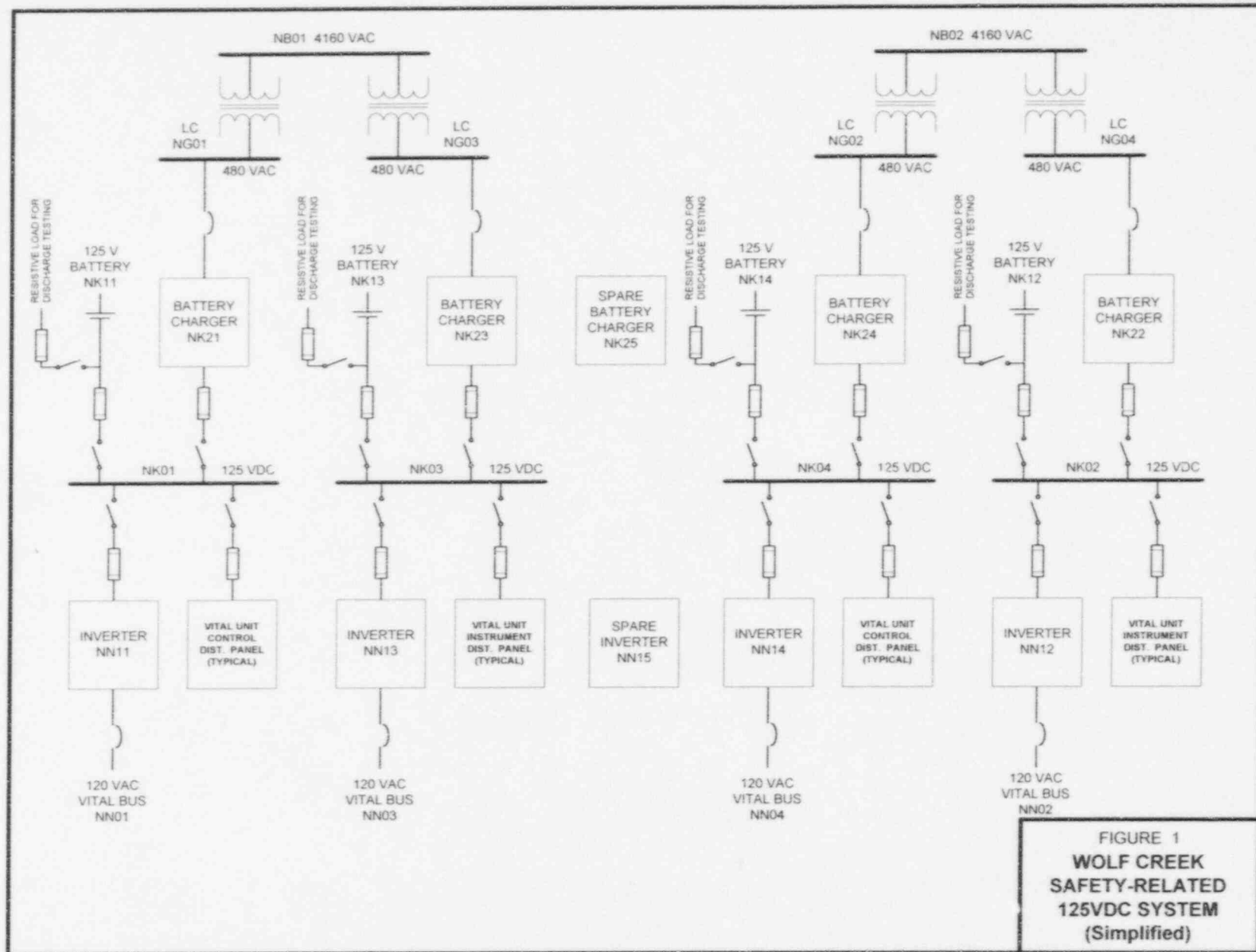
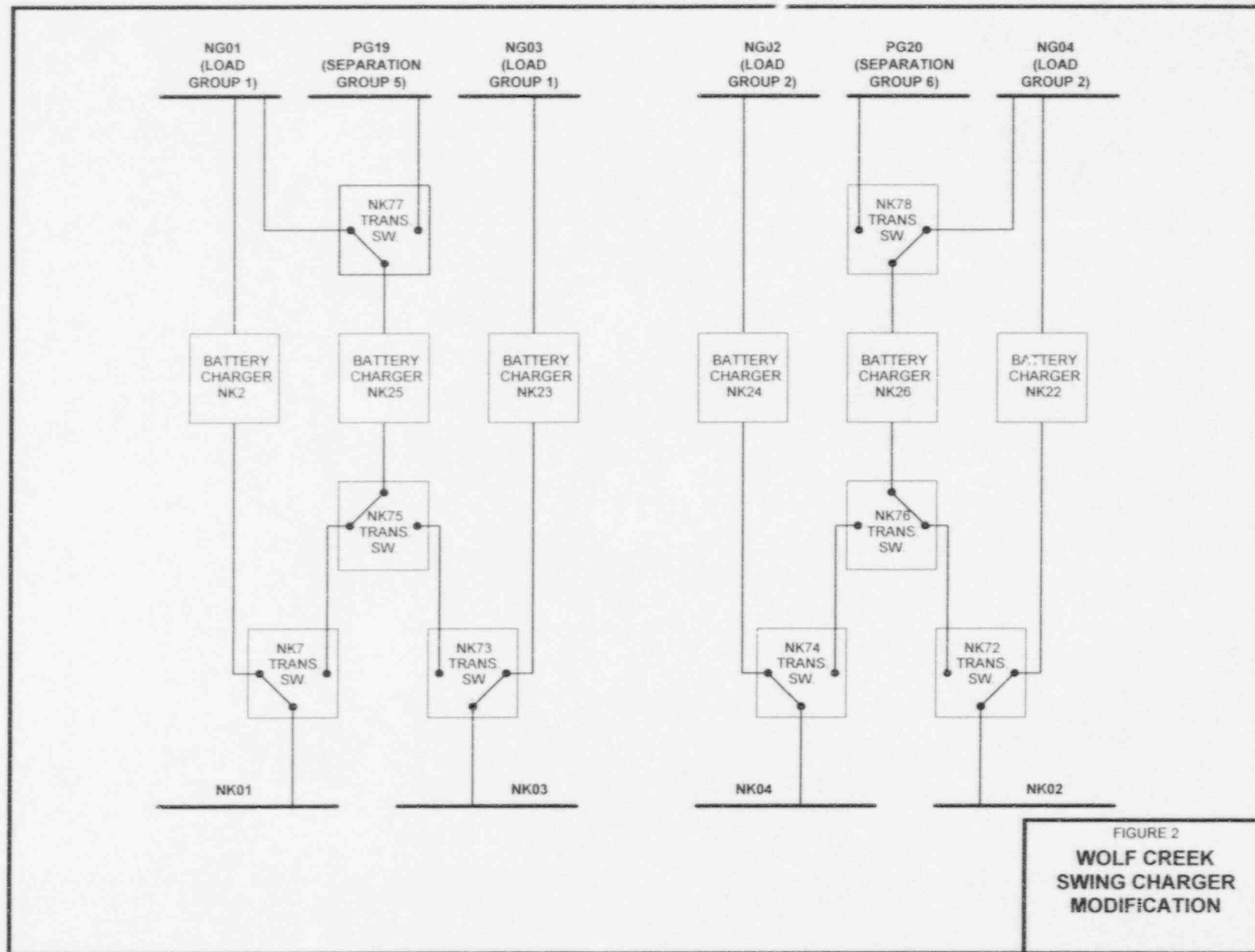


FIGURE 1
WOLF CREEK
SAFETY-RELATED
125VDC SYSTEM
(Simplified)



ATTACHMENT II

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

No Significant Hazards Consideration Determination

This license amendment request proposes a revision to the 125-volt D.C. Sources Technical Specifications 3.8.2.1 and 3.8.2.2 and the Onsite Power Distribution Technical Specifications 3.8.3.1 and 3.8.3.2.

The 125-volt D.C. Sources Technical Specifications 3.8.2.1 and 3.8.2.2 would be revised to include provisions for installed spare chargers, which will be added to the plant design during the next refueling outage.

The Onsite Power Distribution Technical Specifications 3.8.3.1 and 3.8.3.2 would be revised to indicate that spare charger NK25 may be connected in place of charger NK21 or NK23, and charger NK26 may be connected in place of charger NK22 or NK24.

Evaluation

The proposed changes to the technical specifications do not involve a significant hazards consideration because operation of Wolf Creek Generating Station in accordance with these changes would not:

Standard I - Involves a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated

These proposed technical specification changes do not alter the plant design bases nor do they involve any hardware changes that significantly increase the probability of any event initiators. There will be no change to normal plant operating parameters or accident mitigation capabilities. There will be no increase in the consequences of any accident or equipment malfunction.

Standard II - Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated

The proposed technical specification changes do not involve any design bases changes nor are there any changes to the method by which any safety-related plant system performs its safety function. The normal manner of plant operation is unaffected. No new accident scenarios, transient precursors, failure mechanisms, or limiting single failures are introduced as a result of these changes.

Standard III - Involve a Significant Reduction in the Margin of Safety

There will be no affect on the manner in which safety limits or limiting safety system settings are determined, nor will there be any effect in those plant systems necessary to assure the accomplishment of protection functions. There will be no impact on DNBR limits, F_0 , $F\text{-}\Delta\text{-}H$, LOCA PCT, peak local power density or any other margin of safety.

Based on the above discussions, it has been determined that the requested technical specification changes do not involve a significant increase in the probability or consequences of an accident or other adverse condition over previous evaluations; 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.

ATTACHMENT III
ENVIRONMENTAL IMPACT DETERMINATION

Environmental Impact Determination

10 CFR 51.22(b) specifies the criteria for categorical exclusions from the requirements for a specific environmental assessment per 10 CFR 51.21. This amendment request meets the criteria specified in 10 CFR 51.22(c)(9). The specific criteria contained in this section are discussed below.

(i) the amendment involves no significant hazards consideration

As demonstrated in the No Significant Hazards Consideration Determination in Attachment II, the requested license amendment does not involve any significant hazards consideration.

(ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite

The requested license amendment involves no change to the plant design bases and does not involve any change in the manner of operation of any plant systems involving the generation, collection or processing of radioactive materials or other types of effluents. Therefore, no increase in the amounts of effluents or new types of effluents would be created.

(iii) there is no significant increase in individual or cumulative occupational radiation exposure

The requested license amendment involves no change to the plant design bases and does not involve any change in the manner of operation of any plant systems involving the generation, collection or processing of radioactive materials or other types of effluents. Furthermore, implementation of this proposed change will not involve work activities which could contribute to occupational radiation exposure. Therefore, there will be no increase in individual or cumulative occupational radiation exposure associated with this proposed change.

Based on the above it is concluded that there will be no impact on the environment resulting from this change. The change meets the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.21 relative to specific environmental assessment by the Commission.