



TUELECTRIC

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Ref. # 10CFR50.90
10CFR50.36

C. Lance Terry
Group Vice President

September 19, 1996

U. S. Nuclear Regulatory Commission
Attn: Document Control Room
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION AND EDITORIAL
CORRECTION FOR LICENSE AMENDMENT REQUEST 96-005
INVERTER/BATTERY CHARGER MODIFICATION

- REF: 1) TU Electric letter TXX-96432 dated July 31, 1996, from C. L. Terry to the Nuclear Regulatory Commission, "Submittal of License Amendment Request 96-005 pertaining to Inverter/Battery Charger Modification"
- 2) TU Electric letter TXX-96447 dated August 23, 1996, from C. L. Terry to the Nuclear Regulatory Commission, "Response to request for additional information on License Amendment Request 96-005"
- 3) TU Electric letter TXX-96451 dated August 27, 1996, from C. L. Terry to the Nuclear Regulatory Commission, "Response to request for additional information on License Amendment Request 96-005"
- 4) Telephone conference call from T. J. Polich, A. S. Gill and S. K. Mitra of Nuclear Regulatory Commission to R. D. Walker of TU Electric on September 13, 1996

Gentlemen:

By Reference 1, TU Electric submitted License Amendment Request 96-005 to amend the CPSES Unit 1 facility operating license (NPF-87) and CPSES Unit 2 facility operating license (NPF-89). These changes are associated with a plant modification in which the inverters and battery chargers are being replaced and an installed spare inverter is being added for each safety train. Per References 2 and 3, TU Electric provided responses to earlier NRC questions on the License Amendment Request.

Attachment 3 of Reference 1 pertained to the mark-up of affected Technical Specification (NUREG-1468) pages. Page 3/4 8-16 of Reference 1 Attachment 3 inadvertently failed to add the word "inverter." at the end

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of the marked-up foot note similar to other mark-ups on pages 3/4 8-15 and 3/4 8-17. Attached to this transmittal is a mark-up of the affected Technical Specification (NUREG-1468) page 3/4 8-16 correcting this editorial error. This change/correction does not change the analysis and conclusions of Reference 1 and is consistent with the intent of the License Amendment Request.

Additionally, in response to NRC questions during telephone conference (Reference 4), the following information is provided:

Question 1: Has the battery charger rating increase from 225 Amps to 300 Amps, been considered for impact on the Emergency Diesel Generator (EDG) capacity?

Response 1: TU Electric has considered the impact of the new battery chargers on the Emergency Diesel Generator (EDG) capacity and determined that the EDG loading is acceptable. The loading impact is addressed in calculation EE-CA-0007-3377 Revision 1, CCN #3, " Unit 1 Diesel Generator Database Report."

Question 2: Are the interfacing cables for the new battery chargers being replaced due to the increase in battery charger rating from 225 Amps to 300 Amps?

Response 2: The cables interfacing with the battery chargers will not be replaced. These cables were originally designed for 300 Amp battery chargers and are therefore suitable for the new battery chargers.

Question 3: Identify whether the Design Basis Accident (DBA) or Station Blackout (SBO) scenario is more limiting for the battery capacities. Are the batteries capable of handling the Design Basis Accident (DBA) and Station Blackout (SBO) requirements, with the load change resulting from the inverter and battery charger modification?

Response 3: CPSES Class 1E battery sizing calculations do not differentiate between DBA and SBO loads. The calculations assure that the batteries are adequately sized to feed all DC loads (inclusive of all DBA, SBO and other loads connected to the battery) for 4 hours in case of loss of AC power, with a margin of 15% after considering aging factor of 1.25 and taking into account the temperature correction factor for the minimum electrolyte temperature of 67°F. The calculations also assure that the battery end of the duty cycle voltage is equal to or greater than 105 Volts. Battery duty cycle of 4-hours meets the CPSES SBO coping requirements. CPSES Class 1E battery sizing continues to meet these requirements after the inverter/battery charger modification. These evaluations for battery capacity and voltage profile are documented in calculations 16345-EE(B)-053 Revision 5, CCN #7, " Sizing

Verification- Class 1E Batteries and Battery Chargers" and EE-CA-0009-3025 Revision 0, CCN #1, " Station Blackout- Class 1E Battery Capacity." The adequacy of available voltage at the equipment terminal has been established, in various calculations, based on battery output voltage of 105 Volts. The adequacy of the DC input terminal voltages at the UPS inverters has been verified in calculation 16345-EE(B)-011 Revision 8, CCN #3, " Validation of Cable Sizing Calculation - DC System for Class 1E Cables Based on Voltage Drop and Ampacities."

The SBO loading on the non-Class 1E batteries has been reviewed and the batteries are adequately sized to cope with the SBO scenario as documented in calculation EE-CA-0009-3017 Revision 0, CCN #2, "Non-Safety Battery & Charger Size (Battery BT1D2, BT1D4, BT1D5)."

Please note that the calculations at CPSES are updated from time to time according to plant procedures. Should you have any additional questions, please contact Mr. Jacob M. Kulangara at (817) 897-0124.

Sincerely,

C. L. Terry
C. L. Terry

By: *Roger D. Walker*
Roger D. Walker
Regulatory Affairs Manager

JMK/jmk
Attachment

c- Mr. T. J. Polich, NRR
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