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JOHN K. BRYAN
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August 24, 1981

Mr. Harold R. Denton
Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

ULNRC-487

DOCKET NUMBERS 50-483 AND 50-486
CALLAWAY PLANT, UNITS 1 & 2
FINAL SAFETY ANALYSIS REPORT

Reference: Summary of 7/16/81 Meeting with Power Systems Branch
Letter dated August 13, 1981, signed by G. E. Edison

The referenced letter transmitted the meeting summary from the July 16, 1981 Meeting with Power Systems Branch. Attached to this letter are responses to Items 3 and 4 of the meeting summary. The status of the remaining open items (all Standard Plant items) is described in Enclosure 2 to ULNRC-485 dated August 21, 1981. These changes will be included in FSAR Site Addendum Revision 4. This information is hereby incorporated into the Callaway Application.

Very truly yours,

John K. Bryan
John K. Bryan

DS/afg
2 Enclosures



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STATE OF MISSOURI)
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CITY OF ST. LOUIS)

John K. Bryan, of lawful age, being first duly sworn upon oath says that he is 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 John K. Bryan
John K. Bryan
Vice President
Nuclear

SUBSCRIBED and sworn to before me this 24th day of August, 1981

Barbara J. Pfaff
BARBARA J. PFAFF
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 22, 1985
ST. LOUIS COUNTY

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W. Hansen
Callaway Resident Office
U.S. Nuclear Regulatory Commission
RR#1
Steedman, Missouri 65077

Agenda Item 3: Supply a description of the analysis and its results used in sizing the circuits from the switchyard.

Response: The site portion of the circuits from the switchyard to the ESF Transformers consist of 1) the 345kV circuit to the Startup Transformer, of which one secondary winding feeds an ESF transformer (the Startup Transformer and the circuit to the ESF Transformer is in the Standard Plant scope), 2) the Safeguard Transformers, and 3) the 13.8 kV cables from the Safeguard Transformers to the ESF Transformers.

The capacity of the 345kV circuit to the Start-up Transformer is more than adequate to supply the total connected loads on the Start-up Transformer.

The Safeguard Transformers are sized so that either Transformer A or B has the capacity to handle the design shutdown loads on one unit and the design basis LOCA load on the second unit simultaneously.

The 13.8kV cables to the ESF Transformers are designed for 16mVA at 95% voltage. The ampacity and group derating factors of the cables are in accordance with the manufacturer's recommendations and IPCEA publication P46-426 for cables in duct banks and maintained spaced trays. The cable ampacities are based on a maximum conductor temperature of 90 degrees C, 100 percent load factor and all cables fully loaded.

Agenda Item 4: Provide a description of the alarms in the plant control room for surveillance of offsite circuits. (See Sections 5.2.3(5), 5.3.2(4) and 5.3.3(5) of IEEE 308-74).

Response: Alarm windows are provided on the plant control room annunciator for the following switchyard conditions:

1. A common window for AC or DC supply trouble.
2. A common window for d-c control power failure to the transformer differentials and breaker failure protection circuits.
3. A common window for switchyard annunciator trouble or oscillograph trouble.
4. A common window for carrier potential or guard tone loss on any 345kV circuit.
5. A common window for safeguard transformer A or B trouble.
6. A common window for breaker troubles such as low gas pressure, loss of auxiliary power, etc., for each individual 345kV breaker.
7. Individual windows for the tripping of each 345kV breaker.
8. Individual windows for 345kV Bus protection trip for each bus.

The common windows are broken down to individual alarm functions on annunciators in the switchyard.

In addition to these alarms, each 345kV breaker has two trip coils (one on each of the two non-class 1E switchyard d-c power systems with its own associated battery) which are each monitored by a red (breaker closed) indicating light on the main control board. There are indicating ammeters on the main control board that indicate the a-c load current through the 345kV breakers. Indicating and recording 345kV bus voltmeters are also located on the main control board.

The plant surveillance of the switchyard is supplemented by remote indication in the System Load Dispatcher office in St. Louis of Callaway 345kV bus voltage and frequency, 345kV line mw and

var flows, breaker position indication, motor operated disconnect switch position, loss of carrier or tone signal, and loss of voltage on the d-c control power circuit.