



Carolina Power & Light Company

SERIAL: NLS-90-067

MAR 15 1990

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62
ARI/RPT POWER SUPPLY (TAC NOS. 73351/73352)

Gentlemen:

By letter dated March 13, 1990, Carolina Power & Light Company provided additional information regarding ARI/RPT. The calculation identified in the text of information provided was inadvertently not mailed with that letter. Attached is the Control Loop Voltage Drop Calculation in support of the information previously provided.

Questions regarding this matter should be directed to Mr. Dale B. Bates at (919) 546-6154.

Yours very truly,

M. R. Bates for LIL

L. I. Loflin
Manager
Nuclear Licensing Section

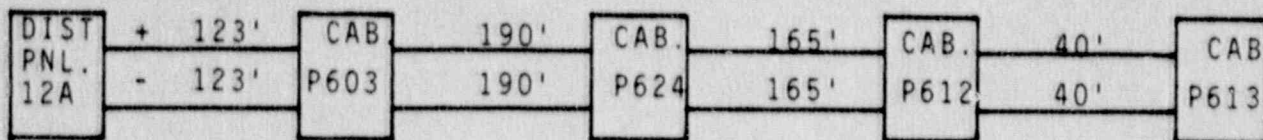
DBB/ecc (653ECC)

Enclosure

cc: Mr. S. D. Ebnetter
Mr. N. B. Le
Mr. W. H. Ruland

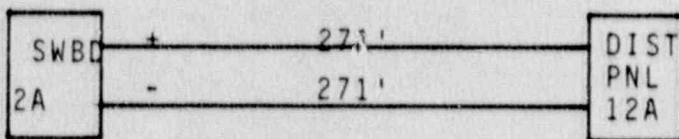
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CONTROL LOOP VOLTAGE DROP CALCULATION



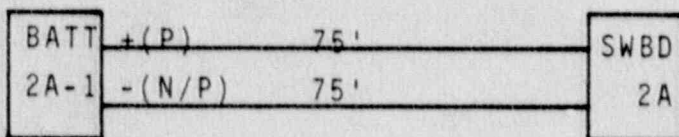
Total length (Worst Case) 1036'
 DC Resistance per 1000' (#12AWG) 1.92
 Total Amps (Ckt. Load) 1.30

$$\frac{1036 \times 1.92 \times 1.3}{1000} = 2.59 \text{ Volts Drop}$$



Total Length 542'
 DC Resistance per 1000' (2-1/0 AWG per leg) .065
 Total Amps (Ckt. load) 34.73

$$\frac{542 \times .065 \times 34.73}{1000} = 1.22 \text{ Volts Drop}$$



Total Length 150'
 DC Resistance per 1000' (2-500 MCM per Leg) .013
 Total Amps (Ckt. Load) 569.5

$$\frac{150 \times .013 \times 569.5}{1000} = 1.11 \text{ Volts Drop}$$

Total voltage drop for control loop is 4.92 VDC

PREPARED BY [Signature] DATE 2-16-90

VERIFIED BY [Signature] DATE 2-20-90

APPROVED BY [Signature] DATE 2-20-90