

## NRC DISTRIBUTION FOR PORT 50 DOCKET MATERIAL

FILE NUMBER

TO:

Mr. Robert W. Reid

FROM:

Carolina Power & Light Company  
Raleigh, North Carolina  
E. E. Utley

DATE OF DOCUMENT

4/25/77

DATE RECEIVED

4/27/77

☒ LETTER☐ NOTORIZED

PROP

INPUT FORM

NUMBER OF COPIES RECEIVED

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1 SIGNED

DESCRIPTION

Ltr. trans the following:

PLANT NAME:

(2-P)

H. B. Robinson Unit No. 2

RJL

ENCLOSURE

Concerns modification to Unit No. 2..  
regarding control of certain ECCS related  
valves from the control room with the  
objective of satisfying the single failure  
criteria & to eliminate the present  
requirement for operator action....ACKNOWLEDGED  
DO NOT REMOVE

(3-P)

(40 cys encl rec'd)

## SAFETY

## FOR ACTION/INFORMATION

## ENVIRO

ASSIGNED AD:

BRANCH CHIEF:

PROJECT MANAGER:

LIC. ASST. :

Schwencer (S)  
Trammell  
Sheppard

ASSIGNED AD:

BRANCH CHIEF:

PROJECT MANAGER:

LIC. ASST. :

## INTERNAL DISTRIBUTION

REG FILE

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## EXTERNAL DISTRIBUTION

## CONTROL NUMBER

LPDR: Southport, NC

TIC:

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ASLB:

ACKS 16 CYS HOLDING/SENT

NAT. LAB:

REG-V. IE

IA PDR

CONSULTANTS:

AS CAT B

BROOKHAVEN NAT. LAB.

ULRIKSON (ORNL)

77180243



Carolina Power & Light Company

Regulatory

File Cy.

April 25, 1977

FILE: NG-3514 (R)

SERIAL: NG-77-414

Mr. Robert W. Reid, Chief  
Operating Reactors Branch No. 4  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555



H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2  
LICENSE NO. DPR-23  
DOCKET NO. 50-261  
LOCKOUT OF CRITICAL ECCS VALVES

Dear Mr. Reid:

On September 17, 1975, Carolina Power & Light Company (CP&L) submitted a proposed plant modification to H. B. Robinson Steam Electric Plant, Unit No. 2, to enable control of certain ECCS related valves from the control room with the objective of satisfying the single failure criteria and to eliminate the present requirement for operator action. Your letter of November 18, 1975, indicated that our proposed modification had not met the single failure criteria in two areas of qualifications, namely (1) a redundant valve position indication system, and (2) physical separation and independence of circuits which assures that no single event will cause spurious valve operation.

The following modification proposal is submitted in consonance with your letter of November 18, 1975. In addition, we have selected only those valves that require operation for post-accident transition from the safety injection phase to the recirculation phase. These valves are listed in Table I.

This modification will use one isolation switch per valve, mounted in the rear of the Reactor Turbine Generator Board (RTGB) and readily accessible to the plant control operator inside the control room. The valve isolation switch will open contacts in both the "hot" side and ground side of the control transformer of the valve control circuit.

Flame retardant cables from the isolation switch to the separate contacts in the control circuitry will be physically separated and run in individual conduits along different routes. In addition, a separate power supply will be provided for the Vital Valve Status Panel indication lights. These valve position

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indicators are presently energized from the same power supply as the valve control circuits. The separate power supply will be routed to a spare contact on the valve position switch. Ratings and physical positions of the contacts eliminate the probability of an over current condition on the normal indication circuit affecting the alternate indication circuit.

The attached Figure 1 shows a typical control wiring diagram for a valve motor operator as presently configured. Figure 2 shows the proposed addition of the valve isolation switch, the separate valve position indication power supply, and the associated wiring.

We feel that this modification will meet all areas of qualification for the single failure criteria. By locating the valve isolation switches at the RTGB, a higher degree of control is maintained by means of greater accessibility and close supervision and direction of the Senior Reactor Operators and the Shift Foreman. By providing for physical separation of control cabling, a failure of either of the two cables, by shorting or severing, would not result in the bypass of the valve isolation switch or actuation of the valve. Periodic checks of the valve isolation switches will be performed during each refueling outage to assure their operability. By providing a separate power supply for the valves' position indication, a single failure will not deny the operator intelligence for determining the position of the valve, particularly if it is an unwanted position.

It is our intention to install this modification during the calendar year 1978, dependent upon availability of materials.

Yours very truly,

  
E. E. Utley  
Senior Vice President  
Power Supply

WH:dmc

Attachment

TABLE I

Valve List

862 A & B	RHR Suction From RWST
863 A & B	RHR Discharge to RWST
864 A & B	SI Supply From RWST
866 A & B	Hot Leg SI
869	Hot Leg SI

FIGURE 2

TYPICAL CONTROL WIRING DIAGRAM FOR LOCKED VALVE

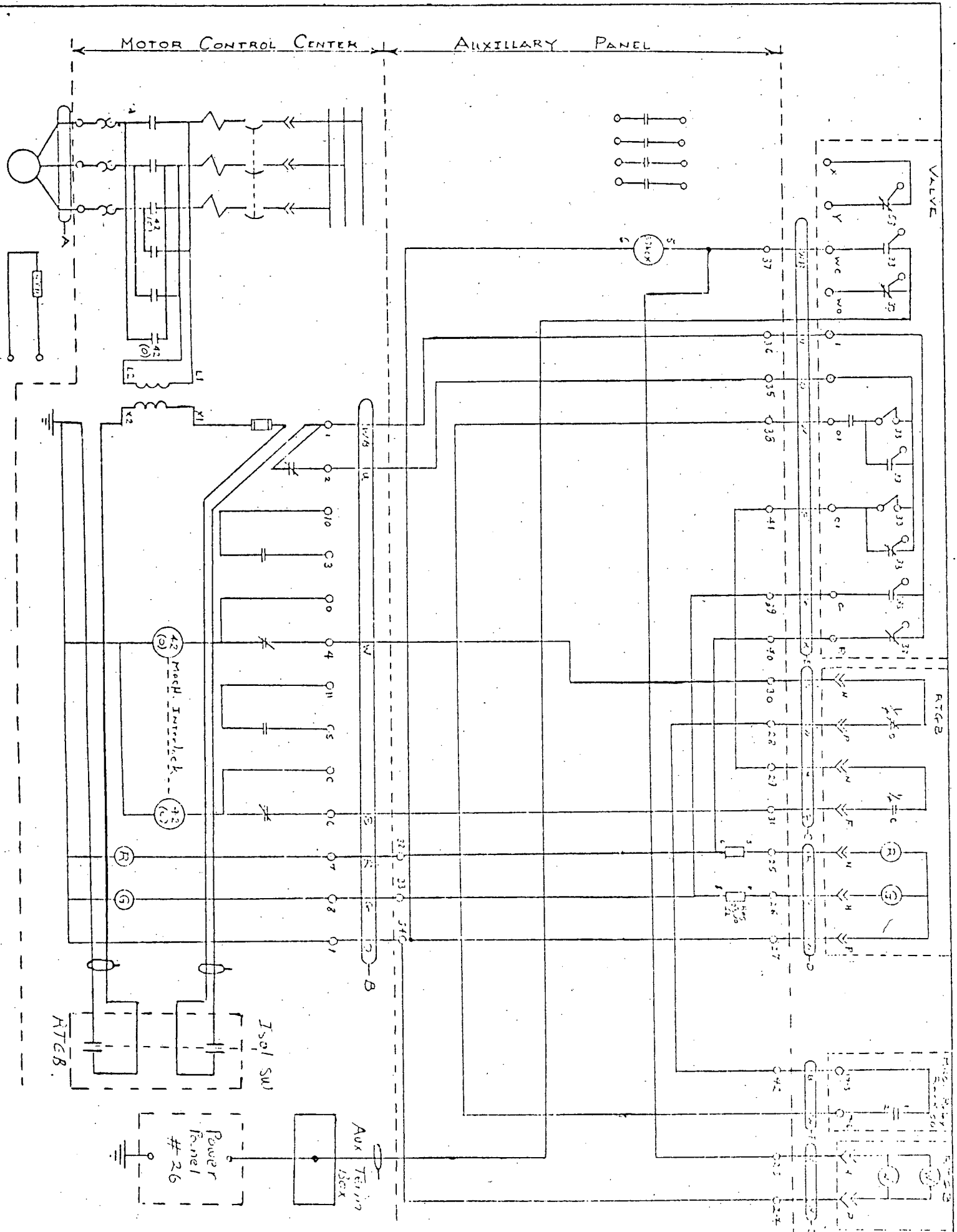


FIGURE 1

## TYPICAL CONTROL WIRING DIAGRAM

