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50-261

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DOCDATE: 01/25/78
DATE RCVD: 01/27/78

DOCTYPE: LETTER NOTARIZED: YES

COPIES RECEIVED
LTR 3 ENCL 40

SUBJECT:
RESPONSE TO QUESTIONS CONCERNING APPLICANT'S OVERPRESSURE SUBMITTALS OF OCT
31, DEC 15, AND DEC 22, 1977, AS REQUESTED BY NRC'S JAN 06 & 10, 1978
TELECON. . . NOTARIZED 01/25/78. . . W/ATT SUPPORTING DRAWINGS.

PLANT NAME: H B ROBINSON - UNIT 2

REVIEWER INITIAL: XJM
DISTRIBUTOR INITIAL:

***** DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS *****

REACTOR VESSEL OVERPRESSURIZATION DISTRIBUTION PER G. ZECH 10/21/76.
(DISTRIBUTION CODE A010)

FOR ACTION: BRANCH CHIEF REID**W/7 ENCL

INTERNAL:

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PAWLICKI**W/ENCL
EISENHUT**W/ENCL
BAER**W/ENCL
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NRC PDR**W/ENCL
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DISTRIBUTION: LTR 40 ENCL 38
SIZE: 2P+4P

CONTROL NBR: 780270051

***** THE END *****

mar

CP&L

Carolina Power & Light Company

January 25, 1978

REGULATORY DOCKET FILE COPY

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802777

FILE: NG 3514 (R)

SERIAL: GD-28-231

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



H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
REACTOR VESSEL OVERPRESSURE PROTECTION
REQUEST FOR LICENSE AMENDMENT

Dear Mr. Reid:

Several questions concerning Carolina Power & Light Company's overpressure submittals of October 31, December 15 and December 22, 1977 were raised during telephone conversations with your Staff on January 6, 1978 through January 10, 1978. This letter provides our responses to those questions.

1. CP&L was requested to supply calculations of heat input overshoots for various initial temperatures. Since there is no heat input case whose calculated overshoot approached the mass input limiting value shown in our letter of December 15, 1977, the calculations below are done with a 58,000 ft.² steam generator heating area. This assumption simplifies the calculations and is conservative because the actual Robinson heat transfer area is only 43,400 ft.². The calculations are based on the September Westinghouse supplement which was transmitted by our letter of October 31, 1977.

Setpoint 400 psig, 2 second opening time, 50°F ΔT

$$250^{\circ}\text{F}, P_{\text{overshoot}} = 75.5 - \frac{(9343-6000)}{(13000-6000)} \quad (75.5-57.5) = 66.9 \text{ psig}$$

$$180^{\circ}\text{F}, P_{\text{overshoot}} = 49.0 - \frac{(9343-6000)}{(13000-6000)} \quad (49.0-42.0) = 45.7 \text{ psig}$$

$$100^{\circ}\text{F}, P_{\text{overshoot}} = 23.0 - \frac{(9343-6000)}{(13000-6000)} \quad (23.0-16.0) = 19.7 \text{ psig}$$

2. As discussed, a revised version of the wiring diagram of the system is attached. Also attached is a revised schematic of the nitrogen system with a corrected solenoid arrangement and all pressure indicators outside of the pressurizer cubicle.

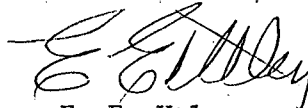
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3. The entire modification has been reviewed with respect to compliance with IEEE-279 and some changes have been made to bring the proposed modification into compliance. Because of uncertainties in the interpretation of the separation criteria, the logic has been changed as reflected in this submittal. In the revised system each valve will be associated with its own logic train and will not receive signals from the other train.

One area remains which is not fully separated, but evaluation shows that this is not a problem. Three temperature indicators in parallel are used to provide input to both of the trains through low-auctioneer devices and a short in one auctioneer could prevent action by the other. However, if the short occurs while the overpressurization system is not armed, i.e. is not required to be operable, then the audible alarm and annunciator are activated. If the system is armed, then in addition to the alarm and annunciator, the PORV would open. Thus, the failure would either be alarmed immediately for appropriate action or the system would actually actuate a PORV.

4. In discussions of the proposed technical specifications in our December 22, 1977 submittal, a revision was discussed. CP&L agrees to the deletion of the words "solid and" from the third line of paragraph 3.1.2.1.d on page 3.1-4.
5. As a result of these discussions, CP&L commits to install a low pressure alarm on the backup nitrogen system. The primary PORV gas supply system is the plant instrument air system which is already alarmed. However, it will not be possible to obtain the hardware for the new alarm before the upcoming refueling outage. The alarm will be installed as soon as it is practical, and, in the interim between installation of the overpressure protection system and the alarm, CP&L commits to have the installed pressure indicators read on a weekly basis.

Yours very truly,



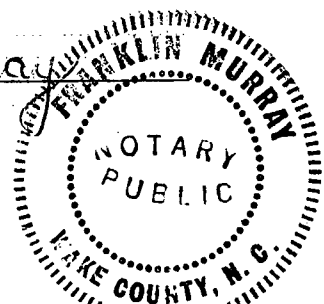
E. E. Utley
Senior Vice President
Power Supply

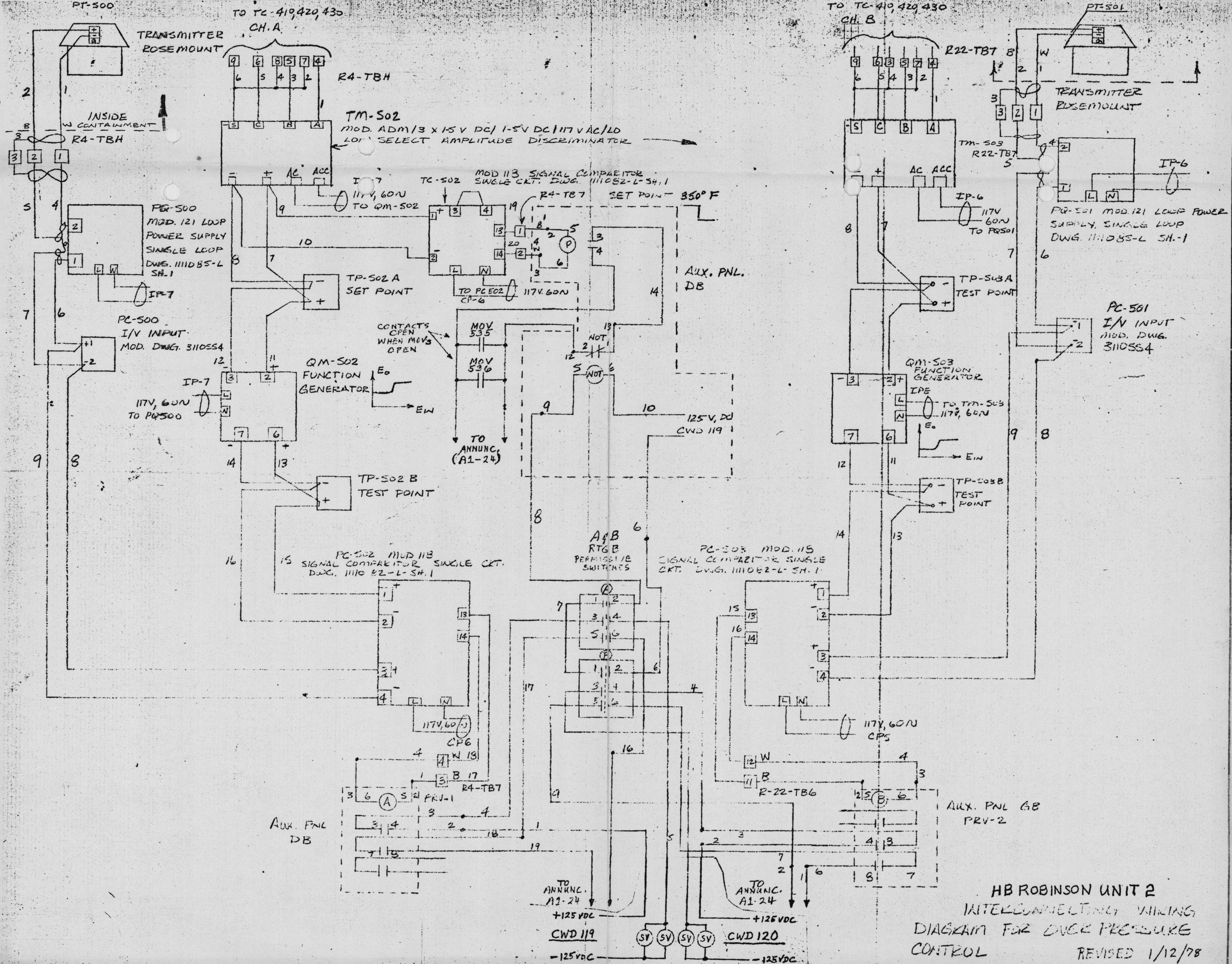
CSB/DLB/gsm
Attachments

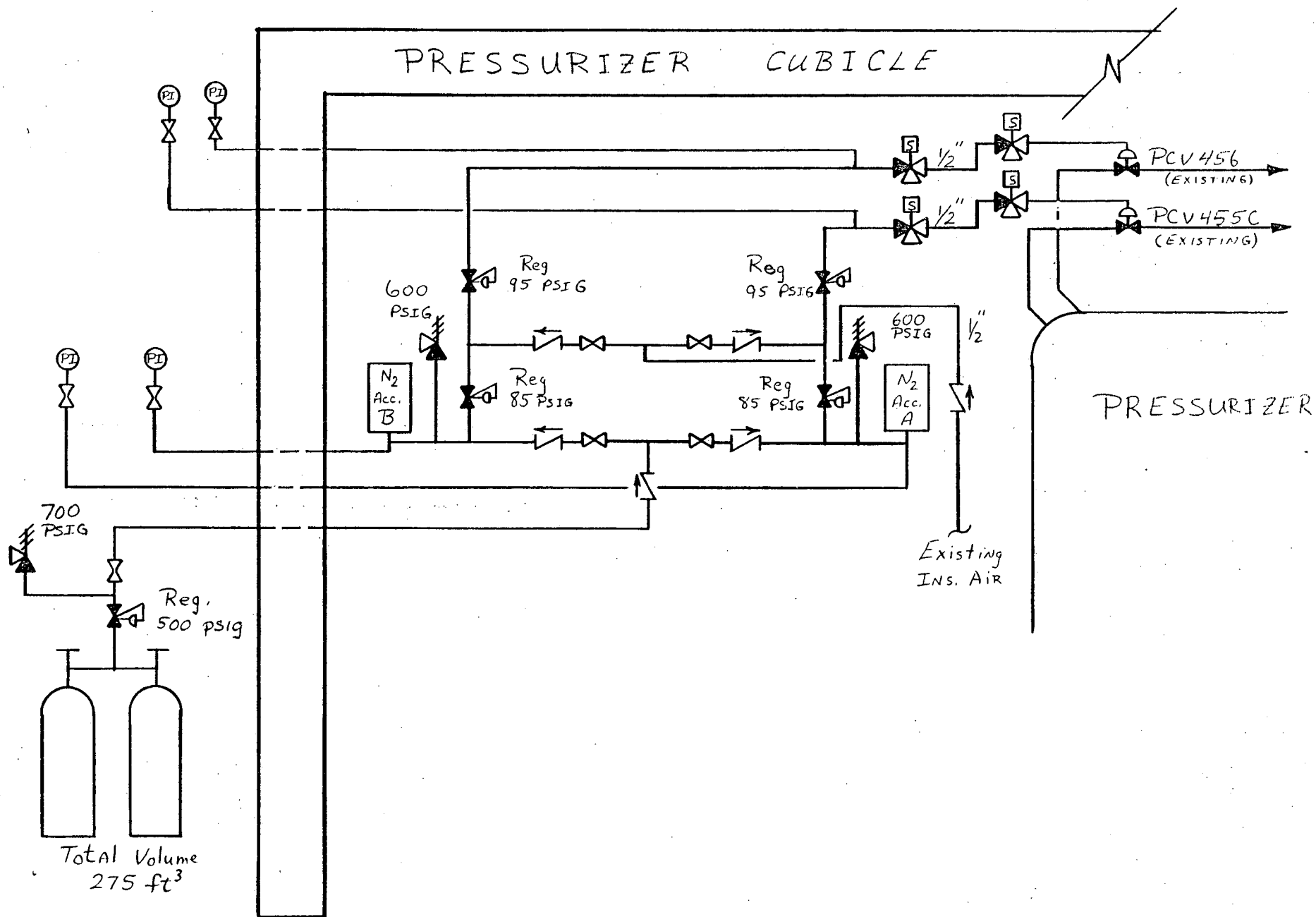
Sworn to and subscribed before me this 25th day of January, 1978.

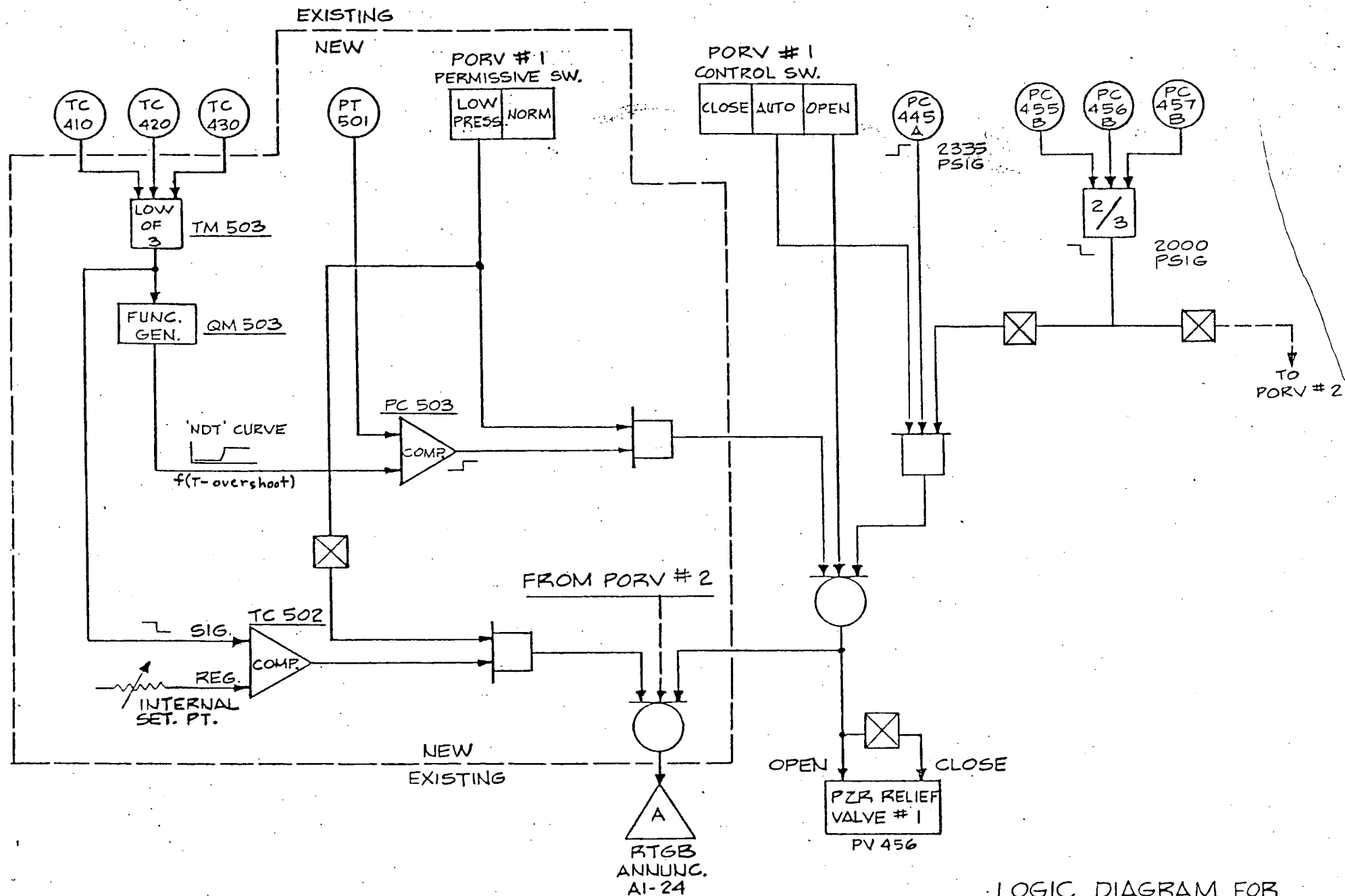
Franklin Murray
Notary Public

My Commission Expires: October 4, 1981

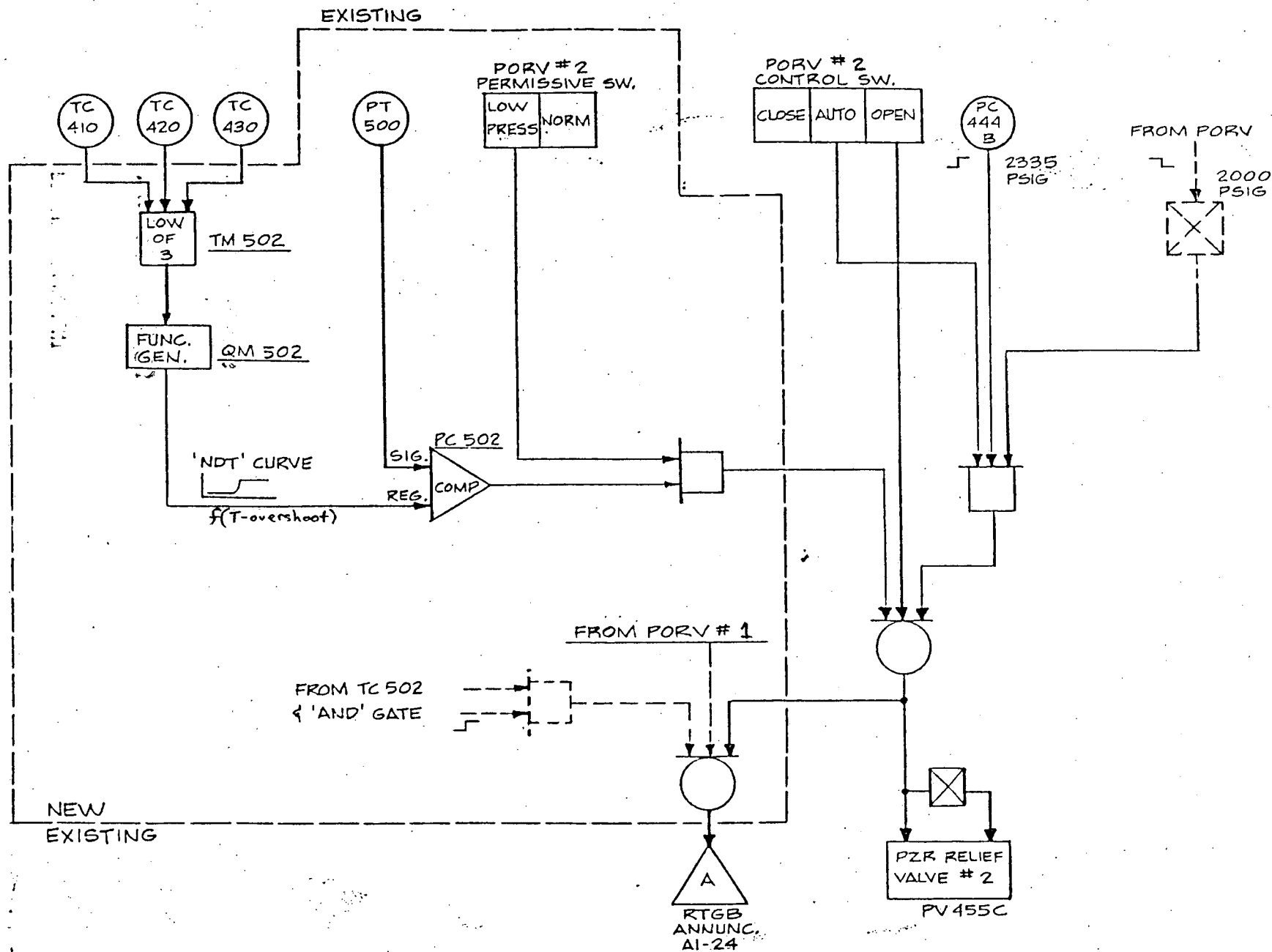








LOGIC DIAGRAM FOR
OVERPRESSURE PROTECTION
H.B. ROBINSON SEG PLANT, UNIT 2
BY: F. BISHOP 10-14-77
SHEET 1 OF 2 REVISED: 1-13-78



LOGIC DIAGRAM FOR
OVERPRESSURE PROTECTION
H.B. ROBINSON SEG PLANT, UNIT 2
BY: F. BISHOP 10-14-77
SHEET 2 of 2 REVISED: 1-13-78

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