



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

1990 N. CALIFORNIA BOULEVARD  
SUITE 202, WALNUT CREEK PLAZA  
WALNUT CREEK, CALIFORNIA 94596

MAY 3 1979

MEMORANDUM FOR: H. C. Moseley, Director, Division of Reactor Operations  
Inspection, IE:HQ

FROM: J. L. Crews, Chief, RONS Branch, Region V

SUBJECT: RANCHO SECO TURBINE AND FEEDWATER REACTOR TRIP MODIFICATIONS

The purpose of this memorandum is to highlight the design of the hard-wired control-grade reactor trips that have been installed at Rancho Seco to actuate on loss of main feedwater and turbine trip.

In a letter to Harold Denton dated May 14, 1979, SMUD described the design of the above identified trips. Attached to the letter was a simplified drawing of the trip circuit which is being submitted as Enclosure A. As shown in this drawing, the two feedwater pressure switches PSL 31767 and PSL 31768 are in series which requires the loss of both feedwater pumps to initiate a reactor trip. The circuit is designed such that the pressure switch contacts must close to energize the reactor trip relay (RXT).

Even though it is understood the trip circuits are to be installed as control grade circuits, Region V is concerned that the non-fail safe design (need-to-energize) may be less reliable than intended by the Commission's Order.

The Principal Inspector at Rancho Seco (Mr. Al Johnson) has expressed serious reservations regarding the non-fail safe design. He recommends that the licensee be required to modify the circuit to make it fail safe.

On May 18, 1979, Region V contacted Mr. Dale Thatcher (Electrical Engineer on NR B&W Review Task Force) and informed him of our concern regarding the design of the above described Rancho Seco trip circuit.

This matter was also discussed by telephone (J. L. Crews to E. L. Jordan) with I on May 16, 1979.

Your office may wish to discuss this concern with the Office of NRR for early resolution.

*J. L. Crews*  
J. L. Crews  
Chief, RONS Branch, Region V

cc: E. L. Jordan, IE:HQ

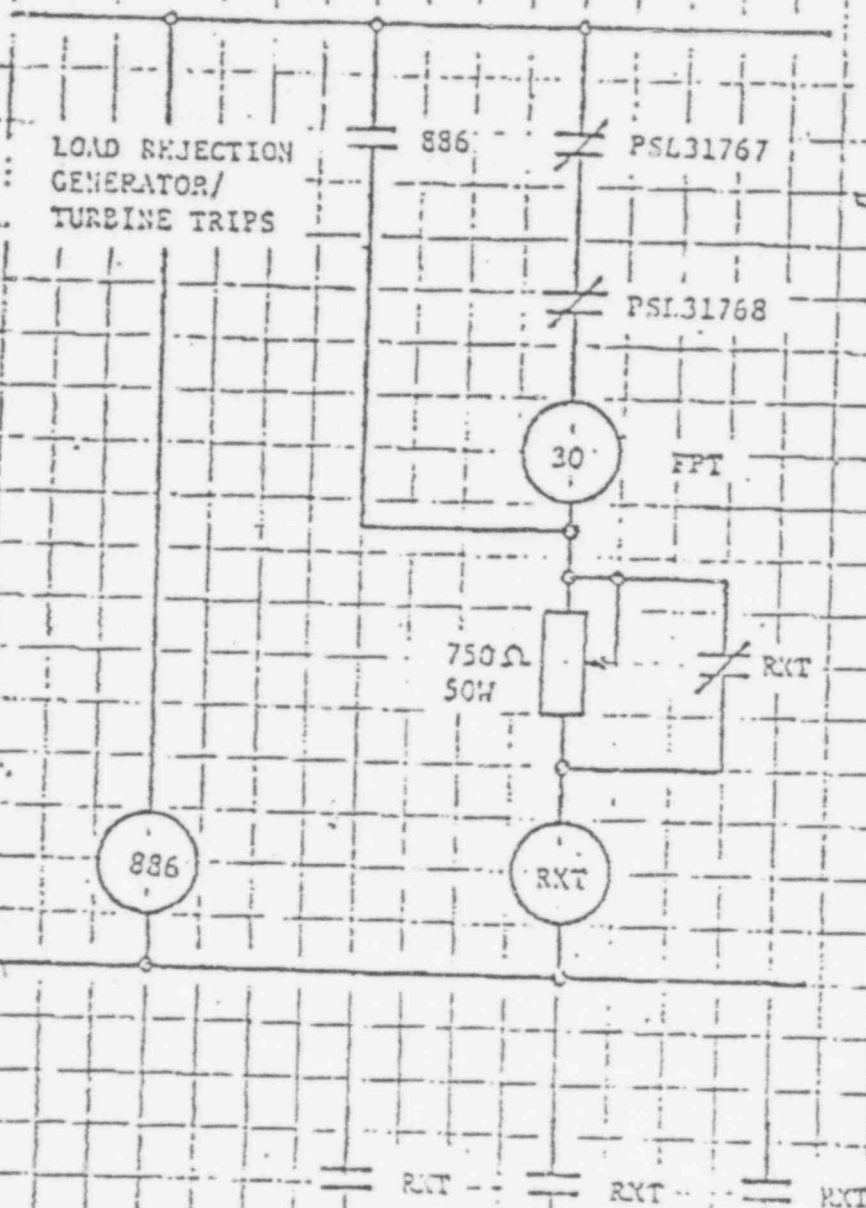
Enclosure  
a/s

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REACTOR TRIP SCHEME



- 886 - GENERATOR/TURBINE TRIP AND LOCK OUT DELAY
- PSL - FEED WATER PRESSURE SWITCHES - CONTACTS MADE ON LOW PRESSURE
- RXT - REACTOR TRIP RELAY
- 30FPT - TARGET RELAY FOR REACTOR TRIP ON LOSS OF FEEDWATER

FOUR ORIGINAL

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