



SACRAMENTO MUNICIPAL UTILITY DISTRICT □ 5201 S Street, Box 15830, Sacramento, California 95813; (916) 452-3211

May 17, 1977

IE FILE COPY

Mr. R. H. Engelken
Director of Regulatory Operations
NRC Operations Office, Region V
1990 N. California Boulevard
Walnut Creek Plaza, Suite 202
Walnut Creek, California 94596

Re: Operating License DPR-54
Docket No. 50-312
Reportable Occurrence 77-5

Dear Mr. Engelken:

In accordance with Regulatory Guide 1.16, Revision 4, Section C.2.b.1, and Technical Specifications for Rancho Seco Nuclear Generating Station, Section 6.9.1, the Sacramento Municipal Utility District is hereby reporting the following Reportable Occurrence as RO 77-5.

On April 19, 1977, a channel surveillance test was being performed on Reactor Protection System (RPS) Channel A. Evaluation of the surveillance data revealed that the actual Flux/Imbalance/Flow trip setpoints for Channel A fell outside the maximum allowable trip envelope for the RPS as defined by Technical Specifications Figure 2.3-2. The power level setting for Break Point 4 (maximum positive imbalance) was greater than the maximum allowable power level at the actual imbalance setting of the Break Point (see attached Figures 1 and 2). The drift experienced by this point created the small, triangular shaped area shown on Figure 2 where Channel A would have permitted operation beyond Technical Specification limits.

The drift was found in two parameters of the envelope. The slope had drifted to 1.967, outside the $2.03 \pm .02$ tolerance established in the calibration. Combined with this was an unusual drift of 0.5% on the positive imbalance limit, which remained within tolerance but was sufficient with the abnormal slope to place Break Point 4 beyond the Technical Specification limit.

Similar surveillance tests had been performed monthly on all channels prior to April 19 with acceptable results and in the three weeks following discovery of the drift on Channel A, the remaining three channels have been tested again. This testing verified that for the period of time that Channel A could have been outside the limits (one month), the remaining channels would have provided adequate protection in the 2-out-of-4 logic of the RPS.

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Mr. R. H. Engelken

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After the drift was discovered, no failed components could be located, so Channel A was recalibrated and returned to service. The channel has been checked weekly for indications of abnormal drift and this checking will continue until the next regularly scheduled monthly surveillance. Testing will return to normal if results are acceptable at that time.

As Figure 2 indicates, the actual power level setting of Break Point 4 exceeded the allowable level by only 0.0656% full power. Data from Babcock and Wilcox indicates that the safety analysis imbalance limit curve which the envelope is designed to approximate would allow power to be 3% higher than the Technical Specification limit at Break Point 4 (see Figure 1). This leads to the conclusion that although the allowable trip envelope was exceeded on one channel, the actual limits that the envelope is intended to represent were not exceeded, even on that channel.

The component in which the drift occurred was a Bailey Meter Company Function Generator, Model 6625027A1.

There was no plant transient associated with this occurrence.

Respectfully submitted,

J. J. Mattimoe

J. J. Mattimoe
Assistant General Manager
and Chief Engineer

JJM:RWC:sal
Enclosures

cs: Director, MIPC (3)
Director, IE (30)