# Southern California Edison Company

P. O. BOX 800 2244 WALNUT GROVE AVENUE ROSEMEAD. CALIFORNIA 91770

October 27, 1978

Gentlemen:

Subject: Docket No. 50-206, Provisional Operating License No. DPR-13 Summary Report of Physics Startup Tests San Onofre Nuclear Generating Station Unit 1

During telephone discussions held with members of the NRC Staff during the week of October 23, 1978, we agreed to submit a summary report of physics startup tests within 45 days after startup of San Onofre Unit 1 following the refueling outage for Cycle 7. The report will consist of a description of the tests performed, a comparison of the measured with the predicted values and a discussion of the engineering staff review for values which do not meet the acceptance or review criterion for each value measured as agreed upon with the NPC staff. The tests to be performed and the acceptance and review criteria to be applied are delineated in the enclosure to this letter. A discussion of the review requirements which will be implemented during the startup testing is also presented in the enclosure.

During the telephone discussions, we recommended several changes to some of the tests and acceptance and review criteria identified by the NRC Staff. In accordance with an NRC staff request, the justification for the changes is as follows:

 The test to measure HZP Critical Boron Concentration with Control Banks -In was deleted because similar data is available from other tests (such as Control Bank Worth).

7811070243

2. The HZP Control Bank Worth Acceptance Criteria of <u>+</u> 10% on combined bank worth was changed to -10% and the +10% limit was changed to a Review Criteria. The reason for this change is that exceeding the positive worth on the control banks does not necessarily indicate a problem with respect to safety limits (i.e., shutdown margin). Mr. D. L. Ziemann, NRC

-2-

### October 27, 1978

- 3. The HZP Control Bank Worth Acceptance Criteria of  $\pm$  15% on individual bank worth was changed to -15% and the  $\pm 15\%$  limit was changed to a Review Criteria. The reason for this change is the same as 2. above.
- 4. The Low Power Core Map is performed at about 30% power instead of HZP in order to facilitate the performance of the startup test since a delay will be experienced at about this power level in order to allow for reheater warmup.
- 5. The test to measure the Power Coefficient and Power Defect was deleted because the existing measurement techniques and instrumentation produce results which are not reliable due to the large degree of noise associated with the measurement of rod worth at power.

If you have any questions, or desire further information concerning the enclosure, please contact me.

Very truly yours,

V6. Haymes

J. G. Haynes Chief of Nuclear Engineering

- cc: M. Davis (Westinghouse)
  - D. R. Pigott (Chickering & Gregory
  - J. Harris (SDG&E)

## SUMMARY REPORT ON PHYSICS STARTUP TESTS

# TESTS AND DESIGN CRITERIA

TEST TO BE PERFORMED	REVIEW CRITERIA	ACCEPTANCE CRITERIA
Critical Boron Concentration HZP, ARO	± 100ppm	₹
Control Bank Worth HZP Combined Banks Individual Banks	+ 10% + 15%	-10% -15%
Boron Worth HZP	+ lpcm/ppm	
Moderator Temperature Coefficient HZP, ARO	<u>+</u> 3pcm/oF	Tech. Spec. Limit
Rod Drop Time	<b>~</b> ~	Tech. Spec. Limit
Core Map, Measured Assemblies Only, At About 30% and 90% Power. Assemblies ≥ .9 of average Assemblies < .9 of average	+ 10% + 15%	Tech. Spec. Limit Tech. Spec. Limit

#### II. REVIEW PROCEDURES

If the stated acceptance and/or review criteria are not met, the following review procedures will be followed:

In all cases, the station engineering staff will review and approve the actions taken and the resolution of discrepancies. In cases where the Acceptance Criteria are not met, the review and approval action by the station engineering staff shall be taken before the plant exceeds 5% power. In cases where the Review Criteria are not met, the review and approval action by the station engineering staff shall be taken before reaching 100% power equilibrium xenon. The justification supporting the conclusion that a safety question does not exist shall be included in the Summary Report on Physics Startup Tests.

I.