Southern California Edison Company

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

K. P. BASKIN
MANAGER OF NUCLEAR ENGINEERING,
SAFETY, AND LICENSING

TELEPHONE
(213) 572-1401

November 19, 1982

Director, Office of Nuclear Reactor Regulation
Attention: D. M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: Docket 50-206
Pressurized Thermal Shock Audit
San Onofre Nuclear Generating Station
Unit 1

By letter dated September 20, 1982 the NRC provided a copy of the report developed by the NRC audit team as a result of their visit to the San Onofre Unit 1 Site on June 3 and 4, 1982. The audit team reviewed the adequacy of our operator training and emergency procedures with regard to pressurized thermal shock (PTS). Section 5 of the report provided five recommendations (specified in four statements) resulting from the audit and we were requested to respond with the actions being taken in regard to those recommendations. The purpose of this letter is to provide the requested response as described below.

Recommendation 1

The Training program should provide more emphasis on past PTS events both within the industry, and especially at SONGS 1.

Response: The annual Operator Requalification Program has been revised to include more emphasis on past PTS events. The July requalification lecture had a two hour segment devoted to history of PTS events both at San Onofre Unit 1 and at other stations. A copy of the material used in those lectures is provided as Enclosure 1 to this letter (the latest version is transmitted).

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Recommendation 2

The training program should present the facts that rapid cooldown in excess of technical specification cooldown rates constitutes a PTS event and that a rapid cooldown event without repressurization can challenge vessel integrity.

Response: The Annual Operator Requalification Program has been revised to address these two NRC concerns. The July requalification lecture included a presentation on this subject and the portion of the lesson plan used is provided as Enclosure 2. In addition, the long term project directed at revising the emergency procedures will be generating a procedure on vessel integrity and the background material and training on this will reemphasize the concern for PTS.

Recommendation 3 and 4

Operator aids should be provided in the control room to provide the operator a means of plotting a cooldown rate. A chart should be provided which shows a saturation curve, subcooling margin curves and the NDT curve.

Response: All of the above described operator aids have already been provided or will be provided in the control room prior to startup from the current outage.

Recommendation 5

The computer printer in the control room should print the correct value of temperature rather than omitting the thousands digit.

Response: The core exit thermocouples sense temperature and provide the operator with indication which can be displayed in a variety of ways on several different devices (e.g., Teleflex printer, Nixi-tube, Subcooling Margin Monitor). The NRC concern in this area arises from the fact that the Teleflex printer located behind the control room panels, when requested, will print out the core exit temperatures but will not include the thousands digit if the temperatures have risen to these levels. In order to avoid any operator confusion when determining core temperatures the appropriate emergency procedures have been revised to direct the operators to use the Nixi-tube display in the control room since this

device does not omit the thousands digit. The Teleflex system will only be used in non-emergency situations when temperatures will not approach the levels of concern.

If you have any questions or desire additional information, please contact me.

Very truly yours,

WP Barker

ENCLOSURE 1