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June 20, 1986

Director, Office of Nuclear Reactor Regulation
Attention: Mr. Harold R. Denton, Director
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Subject: Docket Nos. 50-206, 50-361 and 50-362
Reactor Operator Training Requirements
San Onofre Nuclear Generating Station
Units 1, 2 and 3

Southern California Edison was recently notified by NRC Region V of a new requirement that we believe originates from NRR for reactor operator candidates to be eligible for NRC license examinations. Specifically, SCE was requested to provide evidence that each reactor operator candidate had completed five reactivity manipulations on the actual plant. This new requirement is a deviation from past NRC practice as the NRC approved training program utilizing a plant simulator has been sufficient for all prior San Onofre Units 1, 2 and 3 operator candidates to qualify for operator examinations.

SCE was initially notified by telephone from Region V on April 2, 1986 of the new operator candidate qualification requirement. This new requirement has been complied with in preparation for the two most recent operator candidate examinations (April 29, 1986 and June 3, 1986) due to the lack of sufficient time to assess its validity. However, SCE considers that the applicable NRC regulations and past NRC practice clearly allow the use of a simulator to satisfy the reactivity manipulation requirements of 10 CFR 55. Any NRC required deviation from the current operator training program constitutes a backfit as will be discussed below.

The current regulations for operator licenses are provided in 10 CFR 55, "Operator's Licenses." Specifically, 10 CFR 55.10(a)(6) provides the requirements for the contents of operator license applications regarding operating experience as:

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"Evidence that the applicant has learned to operate the controls in a competent and safe manner and has need for an operator or a senior operator license in the performance of his duties. The Commission may accept as proof of this a certification of an authorized representative of the facility licensee where the applicant's services will be utilized. This certification must include details on courses of instruction administered by the facility licensee, number of course hours, number of hours of training and nature of training received at the facility, and for reactors, the startup and shutdown experience received."

SCE considers that documented participation in an appropriate simulator training program constitutes the evidence requirement stated above. This SCE position is consistent with NRC guidance provided in NUREG-0094, "NRC Operator Licensing Guide," Section II, "Contents of Applications," paragraph 6 which states:

"Applicants must have manipulated the controls of the reactor through at least two reactor startups and have participated as a member in the control room in several other plant transients to be eligible for examination, or have successfully completed an approved training program using a simulator to meet the manipulation requirements."

The NRC has in the past concurred with SCE's position by allowing the use of simulator experience to satisfy the license application requirements. This NRC allowance constitutes an NRC staff position or interpretation of regulations allowing the use of a simulator in the SCE reactor operator qualification and requalification training program.

Federal Register Volume 50, No. 183 issued September 20, 1985 provided the current version of 10 CFR 50.109, "Backfitting." 10 CFR 50.109(a)(1) states:

"Backfitting is defined as the modification of or addition to systems, structures, components or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission rules or the imposition of a regulatory staff position interpreting the Commission rules that is either new or different from a previously applicable staff position after:

- (iii) the date of issuance of the operating license for the facility for facilities having operating licenses."

Thus, it is clear that the new NRC stated requirement for five reactivity manipulations on the actual plant for reactor operator candidates eligibility constitutes a new staff interpretation. Therefore, this requirement falls under the backfit rule.

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The San Onofre Unit 1 operator training program utilizes the Zion plant specific NRC approved simulator. The Zion simulator computer software is modified with San Onofre Unit 1 data prior to Unit 1 operator training to allow for accurate simulator response that mimics the expected Unit 1 responses. Simulator hardware changes are also effected in that selected valve labels and annunciators are changed to more nearly simulate San Onofre Unit 1. SCE utilizes its own training staff along with members of the Zion simulator staff who have received Unit 1 training. SCE's own Unit 1 procedures are used in the Zion simulator. This program, as designed, meets the requirements of 10 CFR 55, Appendix A (3)(e) and (4)(d) which set forth the requirements for use of a simulator for on-the-job training.

San Onofre Units 2 and 3 have a plant specific simulator that responds to control manipulations in a manner that is virtually equivalent to that expected of the actual plant. The Units 2 and 3 simulator meets the requirements of 10 CFR 55, Appendix A (3)(e) and (4)(d) and was approved by the NRC to be utilized for major portions of the San Onofre Units 2 and 3 Detailed Control Room Design Review.

The administrative burden and potential cost of these new requirements are extensive:

1. Available reactivity manipulations - As indicated by the NRC, the source for the new reactivity manipulations requirement is NUREG-0094. NUREG-0094 states in Appendix F, Part C.4 that "Every effort should be made to have a diversification of reactivity changes for each applicant." During power operation, boron dilution is the only planned reactivity manipulation performed routinely. Excluding boron dilution and beginning of cycle core physics testing, there are an average of 8 startup and/or shutdown reactivity manipulations per unit per year. There are approximately 100 reactor operator candidates for Units 2 and 3 alone that are scheduled for NRC examinations over the next 3 years. Requiring five reactivity manipulations from each candidate in order to qualify for examination could take over 25 years under these conditions.
2. Plant as a training tool - The above 25-year period could be reduced if additional (unnecessary for operation) reactivity manipulations were planned. This would have the effect of using a nuclear power plant as an operator training tool as opposed to its primary purpose of producing electricity.
3. Record keeping - In order to conclusively show five reactivity manipulations for each reactor operator candidate, each manipulation would need complete documentation. This would require the control room staff to concentrate on the

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recordkeeping rather than on the control panels. With over 100 reactor operator candidates scheduled for NRC examination over the next few years, the administrative burden is extensive. This would also cause shift manning problems - ensuring that the correct operator candidates are on shift for the reactivity manipulations planned for that particular shift.

In light of the backfit ramifications, SCE requests that the NRC reconsider the imposition of this new requirement for reactivity manipulations on the actual plant for all future reactor operator and senior reactor operator candidate qualifications for San Onofre Units 1, 2 and 3.

If you have any questions regarding the above information, please contact me.

Very truly yours,

Kenneth P. Basler

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