Southern California Edison Company

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

HAROLD B. RAY
VICE PRESIDENT

TELEPHONE
818-302-2281

September 5, 1989

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Gentlemen:

SUBJECT: **Docket No. 50-206**
Full-Term Operating License Open Items (TAC No. 11232)
San Onofre Nuclear Generating Station, Unit 1

The following provides an initial response to a letter dated August 17, 1989, from Mr. Charles M. Trammell, Senior Project Manager, Project Directorate V, USNRC to the undersigned concerning the subject matter. The letter establishes September 30, 1989, as the date by when Edison is to document its schedule for the actions and issues that need to be resolved and completed before our request for a Full-Term Operating License (FTOL) can be approved. We appreciate your consideration in establishing this schedule, and we will provide a submittal by September 30 in response to your letter.

As was clear in a discussion with me by Mr. Trammell and others at your offices on July 31, 1989, and as has now been reinforced in the August 17 letter, the NRC has expected us to provide the requested documentation since shortly following a meeting with Edison on May 1, 1989. I indicated in a telephone conversation with Mr. George Knighton on August 15 that we are acutely aware of our continuing inability to complete the assessment which is the necessary foundation for the required submittal.

The purpose of this letter is to make you fully aware of the circumstances which are impacting completion of the assessment. By this means, I hope we can assist in achieving a final resolution of outstanding issues at the earliest possible date.

A001
1/0

May 1, 1989 Meeting

This meeting is documented in an NRC summary dated May 16, 1989. As stated in that summary, the meeting was held:

1. to develop the schedule for all remaining issues needed for converting the Provisional Operating License to a FTOL,

2. to determine additional actions needed to resolve the thermal shield issue, and

3. to resolve all issues for plant startup as identified in the Region V Confirmatory Action Letter of January 31, 1989 (and supplemented February 8, 1989).

Item 1 corresponds to the subject of this letter. The NRC summary indicates that certain modification items were to be completed by the end of the refueling for Cycle XI, and that other items would be completed in Cycle XII or as determined in a schedule to be set in a revised Integrated Implementation Schedule (IIS), or in another evaluation.

The items identified for Cycle XI completion in the NRC summary of the May 1 meeting could have been completed within the approximately $14.5 million remaining from the more than $200 million approved by the California Public Utilities Commission (CPUC) for modification of San Onofre Unit 1 during Fuel Cycles IX, X and XI. Following the May 1 meeting, Edison intended to promptly determine the cost for any additional items, beyond those identified in the meeting summary, which would be associated with the Cycle XI refueling and provide the documentation requested by the NRC.

As I discussed by telephone with Mr. George Knighton on August 15, one of the additional items of work which Edison will include in the Fuel Cycle XI refueling is upgrade of the environmental qualification of equipment associated with the Hot Leg Recirculation (HLR) function. Environmental qualification of the HLR function was deferred until resolution of shutdown decay heat removal requirements under the Individual Plant Evaluation program. However, our review of the risk considerations set forth in SECY-88-260, "Shutdown Decay Heat Removal Requirements (USI A-45)" leads us to the conclusion that upgrade of the HLR function would provide a worthwhile benefit to plant safety and should be performed at the next refueling outage.

Inadequate Core Cooling Instrumentation System

Following the May 1 meeting, the NRC issued an order dated May 10 for modification of the San Onofre Unit 1 license which requires that Edison implement all the requirements of item II.F.2, "Inadequate Core Cooling Instrumentation System" as soon as practicable but not later than startup for Fuel Cycle XI. (At that time, startup for Fuel Cycle XI was estimated at approximately January 1991.) Also, specific plans for implementation of the system were required to be submitted to the NRC for approval by no later than December 1, 1989.

As discussed in the order, this requires installation of a Reactor Vessel Water Level Instrumentation System (RVLIS). Edison had previously provided its rationale to the NRC concerning why it concluded that the cost for installation of a RVLIS was excessive, in comparison with the benefits it would provide. The order sets forth the NRC's evaluation of this rationale and concludes that RVLIS must be added, as indicated.

Following receipt of the NRC order, Edison again reviewed the cost of the work discussed in the May 1 meeting, plus RVLIS, and the cost of additional modifications intended to be performed. We have concluded that the total cost has increased to approximately $20 million more than the $14.5 million of remaining authorized funding. The CPUC was recently advised of this in accordance with its order limiting the total cost of modifications during Fuel Cycles IX, X and XI.

Thermal Shield Repair

As indicated above, a second topic of the May 1 meeting concerned the monitoring of status and repair of the thermal shield. A mid-Cycle X outage was discussed to inspect, and possibly to repair the thermal shield, and on May 15 the NRC issued a license amendment requiring Edison to submit a conceptual design and plan for performing the repair. (This submittal is currently scheduled for September 30, 1989, as discussed in our letter dated August 22.)

During the meeting on May 1, Edison indicated that, if the thermal shield did require repair during the mid-Cycle X outage, then Cycle XI modifications would be made at that time as well. However, the subsequent growth in those modifications, including the addition of RVLIS, has increased their scope such that we cannot be prepared to complete all Cycle XI modifications during a mid-Cycle X outage.

Also, based on further evaluation, it is possible that we should perform a refueling during an outage to repair the thermal shield. We are considering dates as early as March 1990, when a shutdown to perform a steam generator tube inspection is currently required, as the proper time to complete Fuel Cycle X and to conduct a refueling which would begin Fuel Cycle XI.

Finally, in addition to submittal to the NRC of a conceptual design and repair plan for the thermal shield, we are also evaluating acceptance criteria which could permit continued operation during Fuel Cycle X, following a mid-cycle inspection, and repair of the thermal shield in 1991 at the presently scheduled Fuel Cycle XI refueling date. (The criteria are scheduled for submittal to the NRC by September 13, 1989.)

Revised Cycle XI Refueling Dates

As indicated above, the NRC order of May 10 anticipated a Fuel Cycle XI refueling with a return to service in January 1991. Edison should be able to perform the work required, including seeking an increase in CPUC authorized funding, consistent with currently projected Fuel Cycle XI return to service dates which are between March and August 1991. (The date depends on the length of a mid-Cycle X thermal shield outage.) However, if we were to refuel in 1990 as part of the thermal shield repair outage, then we would be limited to performing only those Fuel Cycle XI modifications identified in the NRC summary of the May 1 meeting referenced above, plus upgrade of the HLR function. RVLIS and other additional items would then be performed during the Cycle XII refueling outage.

We recognize that this would require a modification of the NRC order, and we will not request such modification until we were certain that the Fuel Cycle XI refueling should occur in 1990 in connection with repair of the thermal shield and concurrent inspection of the steam generator tubes.

CONCLUSION

Our assessment of the considerations and circumstances discussed above continues and is very active. A large number of specific details and contingencies are being considered.

We would like to meet with you for additional discussion, and we will contact you to schedule a date shortly. At that time, we will present our preliminary conclusions for your information.

Sincerely,

Harold B. Ray

HBR:NRC:905

cc: J. B. Martin, Regional Administrator, NRC Region V
C. Caldwell, NRC Senior Resident Inspector, San Onofre