UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 85 TO PROVISIONAL OPERATING LICENSE NO. DPR-13

SOUTHERN CALIFORNIA EDISON COMPANY

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 1

DOCKET NO. 50-206

1.0 INTRODUCTION

By letter dated September 20, 1984, Southern California Edison Company (the licensee), submitted an application to amend Provisional Operating License No. DPR-13 by addition of license condition 3.K.

The proposed license condition as submitted by the licensee would require:

(1) By July 1, 1986 or startup from the Cycle IX refueling outage, whichever is earlier, SCE shall install a PASS and implement a post accident sampling program at San Onofre Unit 1. However, SCE agrees to pursue the completion of a PASS by an earlier date, but in no case shall it be delayed beyond the aforementioned date.

(2) Prior to the date in (1) above or until the PASS is operable, SCE shall maintain in effect those compensatory measures described in the SCE letter dated August 14, 1984.

A Notice of Consideration of Issuance of Amendment to License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action was published in the Federal Register on October 22, 1984 (49 FR 41300). No request for hearing or comments were received.

2.0 BACKGROUND

NUREG-0737, "Clarification of TMI Action Plan Requirements", established a requirement for licensees to install post-accident sampling systems (PASS). Licensee commitments for implementing this item (among others) were confirmed by order.

For San Onofre Unit 1, the licensee submitted details of the plans for a PASS by letters dated April 15, 1982, December 3, 1982, and February 16, 1983 (Ref. 1 through 3). These letters indicated that installation of the PASS would be complete prior to startup from the outage that began on February 27, 1982 except that the oxygen analyzer and undiluted sample facility would be completed during the next refueling outage (Cycle IX). The NRC confirmed the above commitment by order dated March 14, 1983 (Ref. 4).

Subsequently, the licensee determined that for several reasons, the PASS implementation could not be completed before startup from the present outage. Therefore, a deferral of the schedule was requested. To change the schedule established by the March 14, 1983 order, the licensee requested that a license condition be added to incorporate the new schedule into the license.

3.0 DISCUSSION

The application for license amendment was submitted on September 20, 1984 (Ref. 5). By letters dated May 1, 1984, June 28, 1984 and August 14, 1984, the licensee presented additional information related to this request (Ref. 6 through 8).

These letters described the reasons for the delay in completing the PASS and the licensee's justification for a longer schedule.

The August 14, 1984 letter described the compensatory measures that would be provided to serve the PASS function until the on-line system detailed in References 1 through 3 is fully operational.

The key to the compensatory measures is completion of the undiluted grab sample capability which was originally scheduled for completion by the end of the next outage. However, in the August 14, 1984 letter, the licensee committed to complete this modification by January 7, 1985. In fact, by letter dated October 9, 1984 (Ref. 9), the licensee noted that this sample capability should be complete by mid-November 1984. Procedures for taking samples, onsite storage and shipment to the testing facility will also be completed on the same schedule.

4.0 EVALUATION

Under the present work schedule, installation of the on-line PASS should be complete with turnover to station personnel by June 1985. Final procedure development for the system is expected to take 4 weeks and training an additional 8 weeks after turnover of the system provided San Onofre 1 is in Mode 1, 2, or 3 when the system can be effectively utilized. Therefore, the PASS could be fully operational by the end of 1985, if no serious startup problems are encountered. However, during startup of similar PASS systems for Units 2 and 3, various problems arose which prevented the PASS from being made operable on the desired schedule. As a result, the license conditions relating to the implementation schedules for the plants had to be changed more than once. To avoid such iterations of the schedule for Unit 1, the licensee requested a revised completion date of July 1, 1986 or prior to startup from the Cycle IX outage, whichever is earlier.

The license condition as originally proposed by the licensee would have included a sentence stating "However, SCE agrees to pursue the completion of a PASS by an earlier date, but in no case shall it be delayed beyond the aforementioned date." While the staff believes that it is appropriate,

and indeed will expect, that the licensee use its best efforts to complete the PASS as soon as possible, the above sentence was not included in the license condition to avoid any question of interpretation of the commitment. The staff will monitor the licensee's progress toward making the PASS fully operational. As noted in References 8 and 9, it may be necessary to take the grab sample capability out of service periodically for construction activities or startup tests for the PASS. Such intervals will be of short duration and the licensee will notify the staff whenever this becomes necessary.

The grab sample capability will permit taking samples of reactor coolant in the event of severe core damage so that quantitative analyses of the chemical and radionuclide composition of the coolant can be performed. The grab sample can be analyzed to determine pH and chloride concentration as well as radionuclides. Rapid assessment of the relative degree of core damage will be provided by the containment high-range radiation detectors installed in response to TMI Action Plan Item II.F.1.3. These two monitors provide readouts of radiation levels inside containment up to 10^8 R/hr. They are located as to permit the detectors to monitor containment atmosphere without obstruction by the shield walls. Correlations between the radiation readouts and core accident conditions, such as gap activity release have been developed.

Containment atmosphere hydrogen levels can be determined from the hydrogen monitors installed in response to Item II.F.1.6. The hydrogen monitors provide redundant, continuous readout in the control room of hydrogen levels inside containment from 0 to 10 volume percent. These sensors are located with access to the upper regions of the containment building to provide optimum monitoring of the containment atmosphere.

A station procedure is in place for alternate methods of post-accident sampling utilizing the above features. The core damage assessment procedure addresses use of the grab sample facility results and the above instruments.

In summary, the licensee has proposed a license condition to establish a new implementation schedule for the PASS. Until that time, compensatory measures, including the undiluted grab sample capability will be provided as discussed in the August 14, 1984 submittal. Based on the above considerations, the staff concludes that this proposed license amendment is acceptable.

5.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined by 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission

has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

6.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Letter form K. P. Baskin (SCE) to D. M. Crutchfield (NRC), dated April 15, 1982.

2. Letter from K. P. Baskin (SCE) to D. M. Crutchfield (NRC), dated December 3, 1982.

3. Letter from K. P. Baskin (SCE) to D. M. Crutchfield (NRC), dated February 16, 1983.

4. Letter from D. M. Crutchfield (NRC) to R. Dietch (SCE), dated March 14, 1983, transmitting Order Confirming Licensee Commitments on Post-TMI Related Issues.

5. Letter from G. J. Bjorklund (SCE) to H. R. Denton (NRC) dated September 20, 1984, Proposed Change No. 140.

6. Letter from M. O. Medford (SCE) to D. M. Crutchfield (NRC), dated May 1, 1984.

7. Letter from M. O. Medford (SCE) to D. M. Crutchfield (NRC), dated June 28, 1984.

8. Letter from M. O. Medford (SCE) to W. A. Paulson (NRC), dated August 14, 1984.

9. Letter from H. B. Ray (SCE) to J. B. Martin (NRC), dated October 9, 1984, Response to NRC Inspection Reports 50-206/84-16, 50-361/84-22 and 50-362/84-22.

8.0 ACKNOWLEDGEMENT

F. McKenna and P. Wu contributed to this evaluation.

Dated: November 23, 1984