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October 1, 1992

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

Gentlemen:

Subject: Docket Nos. 50-361 and 50-362
Fire Protection Safety Evaluation Report
San Onofre Nuclear Generation Station, Unit Nos. 2 and 3
(TAC Nos. 71043 and 71044)

Reference: E. Kokajko (NRC) to Harold B. Ray (SCE) letter
dated October 27, 1989. Same Subject

In December 1989, Southern California Edison Company (SCE) reviewed the referenced NRC letter and accompanying Safety Evaluation Report (SER), and noted potential discrepancies between the NRC's SER and previous SCE correspondence. SCE initially believed that the potential discrepancies were not substantive and consequently no formal response to the SER was required. In April 1992, as a result of our ongoing Design Basis Documentation reconstitution efforts, SCE reevaluated the referenced SER and now believes certain documentation discrepancies should be corrected to provide a consistent licensing basis for future activities.

Specifically, our review has concluded that additional clarification should be provided to explicitly define the current licensing basis regarding:

- 1) The scope of SCE's penetrations seal evaluation program,
- 2) The scope of barriers listed in Table 1 of Enclosure 1 of SCE's November 21, 1988, letter, and
- 3) SCE's Yard Area deviation request evaluation, and
- 4) Compliance with BTP CMEB 9.5-1 (NUREG-0800) for San Onofre Units 2 and 3.

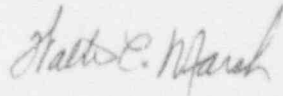
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Accordingly, the enclosure to this letter clarifies the licensing basis for each of the items above.

If you have any questions or comments, please let me know.

Very truly yours,



Enclosure

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cc: J. B. Martin, Regional Administrator, NRC Region V
C. W. Caldwell, NRC Senior Resident Inspector, San Onofre Units 1, 2&3
M. B. Fields, NRC Project Manager, San Onofre Units 2 and 3

Enclosure

Fire Protection Program Clarification for
San Onofre Units 2 and 3

Item 1: Penetration Seal Program

In discussing SCE's penetration seal evaluation program, Section 2.2 of the NRC's SER states:

"The evaluation covered penetrations in barriers separating safe shutdown components, barriers credited with meeting the guidelines of Appendix A to Branch Technical Position (BTP) 9.5-1 and internal conduit seals."

SCE's letter to the NRC dated August 25, 1988, described SCE's seal evaluation program. In that letter, SCE stated that the scope of the program included seals in fire area/zone boundaries credited for the protection of **redundant** safe shutdown equipment and those in barriers that are required to be 3 hour rated barriers by BTP 9.5-1, Appendix A, Section F. Internal conduit seals, as with other types of penetration seals, were evaluated when they were contained within barriers that were in the seal evaluation program scope.

The above scope of barriers is consistent with the set of Technical Specification fire barriers described in SONGS 2 and 3 Technical Specification 3.7.9, "Fire Rated Assemblies".

Item 2: Table 1 Barriers

During an effort to revise the Updated Fire Hazards Analysis (UFHA) to reflect: (1) the Appendix R reassessment, (2) the Fire Area Boundary Penetration Seal Evaluation Program and (3) the Appendix R deviations approved in the NRC's Safety Evaluation dated June 24, 1988, SCE identified minor revisions to the ratings of certain fire area boundaries that had been described in deviation requests which were approved in the June 29, 1988 SER. SCE performed fire protection engineering evaluations, consistent with Generic Letter 86-10 guidance, to reverify the barriers' ability to prevent the propagation of a fire. This issue was discussed with the NRC during the October 1988 Appendix R audit and is documented in Item 7.A of NRC Inspection Report Nos. 50-361/88-22 and 50-362/88-24.

SCE submitted the updated information on the ratings of the affected barriers along with corresponding "Generic Letter 86-10" boundary evaluations in Enclosure 1 of SCE's letter dated November 21, 1988.

The NRC's SER characterizes SCE's identification of these barriers with the following statement:

"By letter dated November 21, 1988 the licensee provided a list of barriers for which it was determined there is a change in the rating of the barrier from that originally stated in the FHA...The licensee included in the November letter, evaluations for those barriers which are credited for providing separation between redundant shutdown trains."

As described in Enclosure 1 of the November 21, 1988 letter, the barriers listed were those barriers for which the following criteria were met:

1. The rating of the barrier had changed,
2. The barrier had been described in previous SCE deviation requests, and
3. The barriers were credited for providing separation between redundant shutdown trains.

Thus, the SER discussion would imply that Enclosure 1 of SCE's November 21, 1988, letter encompassed a larger set of barriers and evaluations than were actually provided.

Item 3: Yard Area

Section 2.5 of the NRC's SER characterizes the yard area intervening combustibles differently than previous SCE submittals. The SER states:

"...the closest A and B train raceways containing redundant shutdown cables are routed through manholes approximately 50 feet apart which are each located within buildings. There are **no intervening combustibles** between the two buildings." (emphasis added)

The SER makes similar statements for the configuration of redundant train A and X raceways and train B and X raceways. SCE's deviation request submitted to the NRC by letter dated November 21, 1988 provided a more accurate representation of these yard area manholes. Specifically, Enclosure 2 of that letter stated:

"The closest A and B train raceways are ... routed through manholes separated by 50 feet and are located within [separate] buildings. There is **no continuous path of combustibles** between the two buildings (other than asphalt pavement)..." (emphasis added)

The November 21, 1988 letter repeated this type of description for the intervening combustibles between redundant trains A and X and trains B and X raceways. As a related item, this same section of the NRC's SER states "All of the manhole covers are fitted with tight metal covers which would prevent flammable liquids from leaking in." Actually, the metal covers are tight fitting, but may not prevent the intrusion of flammable liquids. However, the ground is contoured to prevent the flow of liquids to both sets of manholes.

Therefore, as stated in SCE's deviation request, the spatial separation of the manholes, the contour of the ground, and the lack of a continuous combustible path (other than the asphalt pavement) provide an equivalent level of protection to Section III.G.2 of Appendix R.

Item 4: BTP 9.5-1

In Section 2.10 of the subject SER, the NRC implies that the current Fire Protection Licensing Basis for Units 2 and 3 includes the requirements of BTP CMEB 9.5-1. As shown below, the current Licensing Basis for the Fire Protection Program is the combined requirements of 10 CFR 50, Appendix R, Sections III.G, III.J, and III.O, and the requirements of Appendix A to BTP APCS 9.5-1.

When the NRC originally issued the operating license for Unit 2 in February 1982, License Condition 2.C.(14) parts "a" and "c" read as follows:

- "2.C.(14) Fire Protection (Section 9.5.1, SER, SSER#4, SSER #5, Section 1.2, SSER #5
- a. SCE shall maintain in effect and fully implement all provisions of the approved Fire Protection Plan as amended through Amendment 10 and the Staff's Fire Protection Review described in the SER and Supplements 4 and 5 to the SER. Only those deviations from the Fire Protection Plan that violate the requirements of Sections III.G, III.J, and III.O of Appendix R to 10 CFR 50 and are not otherwise subject to Technical Specifications Limiting Conditions of Operation shall be reported in accordance with License Condition 2.G.
 - c. Prior to exceeding five (5) percent power, SCE shall identify and describe any deviations of the San Onofre 2 fire protection system from the acceptance criteria of Section 9.5.1 of the Standard Review Plan (NUREG-0800, dated July 1981)."

Part 'a' of the above license condition states that SCE will "maintain in effect...the approved Fire Protection Plan..." The NRC approved the Fire Protection Plan in the original SER for Units 2 and 3 (NUREG-0712, dated February, 1981) and SER Supplements 4 and 5. That February 1981 SER provided NRC approval for the Fire Protection Program in effect at San Onofre Units 2 and 3 based on compliance with the requirements of Appendix A to BTP APCS 9.5-1.

Part 'c' of the above license condition required SCE to "identify ... deviations ... from ...Section 9.5.1 of ... NUREG-0800 (BTP 9.5-1)." Because the July, 1981 version of NUREG-0800, Section 9.5.1 contained all of the NRC's Fire Protection requirements, including the requirements of Appendix R, SCE believed the NRC required this comparison to facilitate their review of our Fire Protection Program and determine if San Onofre Units 2 and 3 complied with 10 CFR 50, Appendix R. As such, SCE did not believe that this comparison became part of the Fire Protection Licensing Basis for these Units.

The above referenced License Condition were amended by the NRC in January 1989. Specifically, by letter dated January 20, 1989, the NRC issued Amendment Nos. 69 and 58 which revised the fire protection License Conditions to read as follows:

"SCE shall implement and maintain in effect all provisions of the approved fire protection program. This program shall be (1) as described in the Updated Fire Hazards analysis through Revision 3 as revised by letters to the NRC dated May 31, July 22, and November 29, 1987 and January 21, February 22, April 21, 1988; and (2) as approved in the NRC staff's Safety Evaluation Report(SER) (NUREG-0712) dated February 1981; Supplements 4 and 5 dated January 1982 and February 1982, respectively; and the Staff evaluation dated November 15, 1982; as supplemented and amended by the Updated Fire Hazards Analysis Evaluation for San Onofre Units 2 and 3 dated June 29, 1988. SCE may make changes to the approved fire protection program without prior NRC approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire."

As in the original License Conditions, the NRC conditioned the Units 2 and 3 Licenses to require SCE to "implement and maintain in effect all provisions of the approved fire protection program." SCE considers the approved Fire Protection Program to be documented in the Updated Fire Hazards Analysis (UFHA). The FHA, from the initial October 1977 issuance through Revision 3 of the UFHA, has always listed Appendix A to BTP APCSB 9.5-1 as a licensing basis for the Fire Protection program at Units 2 and 3. Therefore, the amended License Conditions continue to reference Appendix A to BTP APCSB 9.5-1 as the fire protection licensing basis for Units 2 and 3.

The SCE to NRC letters referenced in the amended License Conditions specifically reference Appendix A to BTP APCSB 9.5-1 as the fire protection licensing basis for Units 2 and 3. Of these letters, the April 21, 1988 stated:

"The recent fire protection work performed by SCE has been to evaluate and document SONGS 2 and 3 compliance with Appendix A to BTP APCSB 9.5-1 (1976), Sections III a, J., L., and O. of Appendix R to 10 CFR 50 and Generic Letter 81-12 and Generic Letter 86-10. Because of the substantial evolution in fire protection requirements between 1982 and the present, and because SCE has not conducted an assessment of the SONGS 2 and 3 fire protection program relative to NUREG-0800 since 1982, SCE does not consider that NUREG-0800 is currently a basis for the SONGS 2 and 3 fire protection program."

As can be seen above, the documentation, from original licensing to the present, is that the NRC approved Fire Protection Program at San Onofre Units 2 and 3 consisted of the combined requirements of Appendix A to BTP APCSB 9.5-1 and the requirements of Appendix R to 10 CFR 50. However, in Section 2.10 of the latest NRC SER on Fire Protection, issued on October 27, 1989, the NRC states:

"The staff previously expressed concern that there may be deviations from BTP CMEB 9.5-1 that had not been identified and justified by the licensee. Consequently, a review of the licensee's fire protection submittal was made to identify any such deviations. A number of acceptable deviations have been identified or documented in the staff safety evaluations. On the basis that no additional unreviewed deviations exist, this issue is considered resolved."

This statement appears to indicate that the NRC believes BTP CMEB 9.5-1 to be the licensing basis for the fire protection program at San Onofre Units 2 and 3. As detailed above, BTP CMEB 9.5-1 is not part of our approved fire protection program as documented in our Updated Fire Hazards Analysis.

10 CFR 50.48, "Fire Protection" provides the legal requirements for fire protection programs. This section of the Code of Federal Regulations indicates that compliance with the combination of staff guidance contained in Appendix A to BTP APCS 9.5-1 and the technical requirements set forth in Appendix R to 10 CFR 50 is an acceptable method for satisfying 10 CFR 50, Appendix A, General Design Criterion (GDC) 3.

NRC Generic Letter 86-10 included revised guidance for compliance with GDC 3 and provided two acceptable methods as the following:

1. Compliance with BTP CMEB 9.5-1 of NUREG-0800, "Standard Review Plan" dated July 1981, or
2. Compliance with the combination of staff guidance contained in Appendix A to BTP APCS 9.5-1 and the technical requirements set forth in Appendix R to 10 CFR 50.

The NRC again confirmed these equivalent GDC 3 compliance standards in the October 27, 1989, SER. As detailed above, SCE satisfies the requirements of GDC 3 by method 2 above and considers the fire protection program at San Onofre Units 2 and 3 to be acceptable on that basis.