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50-362 San Onofre Nuclear Station, Unit 3, Southern California 05000362AUTH. NAME: AUTHOR AFFILIATION  
MEDFORD, M. O. Southern California Edison Co.  
RECIP. NAME: RECIPIENT AFFILIATION  
KNIGHTON, G. W. Licensing Branch 3SUBJECT: Discusses ongoing analysis of deviations of 840319 updated  
fire hazards analysis from 10CFR50, App R requirements.  
Analyses should be completed by early 1986. Deviation  
request overview encl.DISTRIBUTION CODE: A006D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 11  
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	NRR LB3 BC	01	3	3			
INTERNAL:	ACRS	11	3	3	ADM/LFMB	1	0
	ELD/HDS2		1	0	IE WHITNEY, L	1	1
	NRR STANG, J	07	2	2	NRR WERMEIL, J06	1	0
	NRR/DE/CEB	09	2	2	NRR/DL DIR	1	1
	REG FILE	04	1	1	RGN5	1	1
EXTERNAL:	24X		1	1	LPDR	03	1
	NRC PDR	02	1	1	NSIC	05	1
NOTES:			1	1			

*Southern California Edison Company*



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

M. O. MEDFORD  
MANAGER, NUCLEAR LICENSING

September 19, 1985

TELEPHONE  
(818) 302-1749

Director, Office of Nuclear Reactor Regulation  
Attention: Mr. George W. Knighton, Branch Chief  
Licensing Branch No. 3  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Gentlemen:

Subject: Docket Nos. 50-361 and 50-362  
San Onofre Nuclear Generating Station  
Units 2 and 3

- Reference: (A) Letter dated March 19, 1984 from Mr. Kenneth P. Baskin (SCE)  
to Mr. H. R. Denton (NRC)
- (B) Letter dated September 25, 1984 from Mr. M. O. Medford (SCE)  
to Mr. G. W. Knighton (NRC)
- (C) Letter dated March 25, 1985 from Mr. M. O. Medford (SCE)  
to Mr. G. W. Knighton (NRC)

On March 19, 1984, Southern California Edison Company (SCE) transmitted the Updated Fire Hazards Analysis (FHA) for San Onofre Units 2 and 3 to the Nuclear Regulatory Commission (NRC) in accordance with 10 CFR 50.71(e). As a result of the program conducted by SCE in preparation of the Updated FHA, the need to complete a number of related licensing activities was also identified. These activities included NRC review and approval of the Updated Fire Hazards Analysis to approve changes to the San Onofre Units 2 and 3 (fire protection) license conditions, NRC review and approval of eight (8) deviations to the requirements of 10 CFR 50, Appendix R and approval of SCE proposed changes to the Units 2 and 3 Technical Specifications. Since that submittal, a meeting was held with NRC Staff on May 23, 1984 to discuss SCE's deviation requests. Also, by letter dated September 25, 1984, SCE provided additional information requested by the NRC during the May 23rd meeting to facilitate review of the deviation requests. Subsequent to SCE's submittal of the initial deviation requests, the NRC issued further clarification of acceptable methods for meeting the technical requirements of 10 CFR 50, Appendix R. This clarification included information provided in the 1984 NRC Regional Workshops and in draft Generic Letter 85-01. Based upon this additional clarification SCE has reviewed the eight deviation requests submitted on March 19, 1984. As a result of this review, SCE is undertaking additional analyses to further clarify and support appropriate requests for deviations to Appendix R requirements. The purpose of this letter is to discuss the ongoing analysis work, update the NRC regarding our deviation requests and identify SCE's intentions for future action.

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Southern California Edison Company has hired a consultant to conduct additional fire protection analyses for San Onofre Units 2 and 3 relative to the technical requirements of 10 CFR 50, Appendix R. The analyses being performed address: associated circuits, loss of offsite power criteria, alternate shutdown capability and fire barriers. The analyses are currently anticipated to be completed in early 1986.

The deviation requests submitted on March 19, 1984 are addressed in the Enclosure and include the following: (1) Control and Instrumentation Cable, (2) Associated Circuits, (3) 1-Hour (fire) Barriers, (4) Cable and Equipment Separation Inside Containment, (5) Loss of Offsite Power, (6) Instrumentation for Alternative Shutdown, (7) Emergency Lighting and (8) Open Penetration Seals. As a result of our review of the additional NRC guidance mentioned above, SCE intends to ultimately withdraw four (4) of the deviation requests based upon either performing the appropriate analysis or implementing plant modifications. These four deviations are: (1) Control and Instrumentation Cable, (2) Associated Circuits, (3) Instrumentation for Alternative Shutdown and (4) Unsealed Penetrations. The deviations would be withdrawn subsequent to completion of the analyses or modifications. SCE also intends to revise two (2) of the deviation requests to provide additional information and/or to clarify the current plant design. These two deviations are: (1) Cable and Equipment Separation Inside Containment and (2) 1-Hour (fire) Barriers. The additional information will be developed during the on-going analyses and will be provided upon completion of that effort. Additional information relative to each of these issues is provided in the Enclosure. SCE is still seeking approval of the remaining two deviations, Loss of Offsite Power and Emergency Lighting, as presented in our March, 1984 submittal.

In addition to the changes outlined above, it is anticipated that the analyses could identify the need for plant modifications, changes to station procedures and/or additional deviations (exemption requests) from Appendix R requirements. It is SCE's current intention to request a meeting with NRC Staff after identification of further actions as outlined above.

If you have questions, please contact me.

Very truly yours,



Enclosure

cc: Mr. H. Rood, Project Manager  
Licensing Branch 3.  
Mr. J. B. Martin  
Region V Administrator  
Mr. F. R. Huey  
Senior Resident Inspector

ENCLOSURE

## DEVIATION REQUEST OVERVIEW

### I. DEVIATION REQUESTS PENDING APPROVAL

- Loss of Offsite Power (Coincident with a Design Basis Fire)
- Emergency Lighting

### II. DEVIATION REQUESTS TO BE ULTIMATELY MODIFIED OR WITHDRAWN

- Cable and Equipment Separation Inside Containment
- 1-Hour (Fire) Barriers
- Control and Instrumentation Cable
- Associated Circuits
- Instrumentation for Alternative Shutdown
- Unsealed Penetrations

- SCE INTENDS TO REVISE THE FOLLOWING DEVIATION REQUESTS TO PROVIDE ADDITIONAL INFORMATION AND/OR CLARIFY THE CURRENT POSITION:

- Cable and Equipment Separation Inside Containment
  - 1-Hour (Fire) Barriers

- SCE INTENDS TO WITHDRAW THE FOLLOWING DEVIATION REQUESTS BASED UPON PERFORMING THE APPROPRIATE ANALYSIS OR PLANT MODIFICATIONS:

- Control and Instrumentation Cable
  - Associated Circuits
  - Instrumentation for Alternative Shutdown
  - Unsealed Penetrations

## CABLE AND EQUIPMENT SEPARATION INSIDE CONTAINMENT

### DEVIATION REQUEST

Section III.G of Appendix R to 10 CFR 50 provides criteria for protection of redundant trains of safe shutdown cables and equipment. Alternative separation criteria was utilized.

### CURRENT POSITION

SCE intends to revise the Deviation Request to provide additional information to facilitate NRC review and approval of the Request.

The additional information to be provided includes:

- control cable routing and separation drawings
- description of the intervening barriers and/or combustibles, as appropriate, for all circuits and equipment

### ACTIVITY

SCE will provide revised drawings depicting the location of all safe shutdown equipment and cable routing within containment and identify all pertinent fire protection features and hazards.

## 1-HOUR FIRE BARRIERS

### DEVIATION REQUEST

If Section III.G.2 of Appendix R to 10 CFR 50 is met by enclosing cable, equipment and associated non-safety circuits in a fire barrier, the barrier is to have a 1-hour rating. The barriers in use at SONGS 2 and 3 are fabricated from Cerablanket, a Johns-Manville product. Cerablanket is similar to Kaowool (a Babcock & Wilcox product) which has been tested, and found acceptable as a fire barrier with a minimum of 51 minutes of protection.

### CURRENT POSITION

SCE intends to revise the Deviation Request to provide additional information to facilitate NRC review and approval of the Request.

The additional information to be provided includes submittal of two test reports documenting testing which SCE has had performed on Cerablanket.

### ACTIVITY

SCE will provide a revised Deviation Request which includes further descriptions of the testing performed.



## CONTROL AND INSTRUMENTATION CABLE

### DEVIATION REQUEST

Section III.G of Appendix R to 10 CFR 50 requires that fire protection features be provided for structures, systems and components important to safe shutdown. This includes protection of redundant trains of cables and equipment. Protection of safe shutdown power cables was provided. However, alternate shutdown capability was provided, rather than analyzing and protecting all control and instrumentation cabling in all fire areas.

### CURRENT POSITION

SCE intends to perform the circuit cable routing and separation review for all safe shutdown equipment. This includes identification of all safe shutdown circuits and cable and conducting the appropriate separation review to the requirements of 10 CFR 50, Appendix R.

SCE intends to withdraw this Deviation Request

SCE intends to meet with NRC subsequent to performing the analysis to discuss follow-on actions, as necessary.

### ACTIVITY

SCE will perform the circuit cable routing and separation review.

## ASSOCIATED CIRCUITS

### DEVIATION REQUEST

Section III.G of Appendix R to 10 CFR 50 requires analysis and protection of associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions. The design of associated circuits is in accordance with IEEE-384 and Regulatory Guide 1.75 as described in the Updated FSAR. However, NRC clarification letters to licensees provided additional definition of associated circuits. No reassessment was conducted.

### CURRENT POSITION

SCE intends to perform the Associated Circuit analysis in accordance with current NRC guidance for all safe shutdown equipment. This analysis will address associated circuits for common enclosures, common power sources and spurious actuation concerns.

SCE intends to withdraw this Deviation Request.

SCE intends to meet with NRC subsequent to performing the analysis to discuss follow-on actions, as necessary.

### ACTIVITY

SCE will perform the Associated Circuit analysis.

## INSTRUMENTATION FOR ALTERNATIVE SHUTDOWN

### DEVIATION REQUEST

NRC IE Information Notice No. 84-09 (IN 84-09) lists the minimum monitoring capability the NRC staff considers necessary to achieve safe shutdown in accordance with Appendix R, Section III.L. The Essential Plant Parameters Monitoring (EPPM) panel is not equipped with either a source range flux monitor or Reactor Coolant system (RCS) cold leg temperature indication.

### CURRENT POSITION

SCE intends to install the RCS cold leg temperature indication at the EPPM panel.

Source range neutron flux indication will be provided outside and independent of the control room.

SCE intends to withdraw this Deviation Request.

### ACTIVITY

SCE will install the RCS cold leg temperature indication at the EPPM panel and source range neutron flux indication at the Evacuation Shutdown (EVSD) panel.

## UNSEALED PENETRATIONS

### DEVIATION REQUEST

Sections III.G.2 and III.G.3 of Appendix R to 10 CFR 50 specify four alternatives that may be implemented outside of primary containment to assure that one redundant train of equipment and cabling necessary to achieve and maintain hot shutdown remains free of fire damage. Contrary to the above requirements, common walls of rooms containing redundant trains of certain safe shutdown equipment have open (unsealed) penetrations.

### CURRENT POSITION

SCE intends to seal the open penetrations in heavy concrete walls which separate redundant safe shutdown trains.

SCE intends to withdraw this Deviation Request.

### ACTIVITY

SCE will seal the open penetrations.