

**Southern California Edison Company**

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VICE PRESIDENT

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June 26, 1989

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

Gentlemen:

Subject: Docket Nos. 50-361 and 50-362  
Reply to a Notice of Violation  
San Onofre Nuclear Generating Station,  
Units 2 and 3

Reference: Letter, Mr. M. M. Mendonca (NRC) to Mr. Kenneth P.  
Baskin (SCE), dated May 26, 1989

The Reference forwarded NRC Inspection Report Nos. 50-206/89-11, 50-361/89-11, and 50-362/89-11 and a Notice of Violation resulting from the inspection conducted by Mr. C. W. Caldwell during the period March 13 - 17 and April 3 - 7, 1989. The Notice of Violation is applicable only to San Onofre Units 2 and 3. In accordance with 10 CFR 2.201, the enclosure to this letter provides the Southern California Edison Company (SCE) reply to the Notice of Violation.

If you require any additional information, please do not hesitate to call me.

Very truly yours,

*Kenneth P. Baskin*

Enclosure

cc: J. B. Martin, Regional Administrator, NRC Region V  
F. R. Huey, NRC Senior Resident Inspector, San Onofre Units  
1, 2 and 3

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ENCLOSURE

REPLY TO A NOTICE OF VIOLATION

Appendix A to Mr. Mendonca's letter, dated May 26, 1989, states in part:

"10 CFR 50.49(f) requires that each item of electric equipment important to safety be environmentally qualified.

"10 CFR 50.49(j) requires that a record of the qualification be maintained to permit verification that each item of electric equipment important to safety is qualified for its application and meets its specified performance requirements when it is subjected to the conditions predicted to be present when it must perform its safety function.

"Contrary to the above, as of March 17, 1989, the licensee did not have a record of qualification for a predicted condition for electrical connectors on excore neutron monitors. The licensee was notified by the manufacturer of the monitors on May 10, 1988, that there was significant possibility of leaks in the connectors for the monitors which could cause degradation or failure of the neutron flux monitoring channel during a design basis accident.

"This is a Severity Level IV violation (Supplement I) applicable to Units 2 and 3."

NRC Inspection Report No. 50-206/89-11, dated May 26, 1989, states in part (page 8):

"Based on the information reviewed, as discussed above, the inspector considered that the licensee's NCR and 10 CFR 50.59 evaluation did not provide an adequate assessment or documentation in accordance with 10 CFR 50.49 requirements. In particular, the 10 CFR 50.59 evaluation credited alternate instrumentation for accomplishing the safety function despite the fact that none of the listed variables provides real time core reactivity information and no administrative controls were established (e.g., control room operators were not notified of the potential for these monitors to fail during post accident conditions). This is considered a violation of NRC requirements."

## RESPONSE

1. Reasons for the violation, if admitted.

SCE admits that the environmental qualification record for the Gamma Metric flux connectors was not maintained in accordance with 10 CFR 50.49. SCE admits that when notified by the vendor (via a 10 CFR 21 Report) that the environmental qualification for the connectors could not be assured, SCE did not adequately perform the requisite safety evaluation and justification for continued operation (JCO).

On May 12, 1988, SCE received a copy of a 10 CFR 21 Report from Gamma Metric concerning the solder connections on their cable assemblies. SCE uses the Nonconforming Report (NCR) process, with its safety evaluation and corrective actions, in conjunction with a written JCO to satisfy 10 CFR 50.49 environmental qualification requirements. On June 13, 1988, Nonconformance Report (NCR) G-0865 Rev. 0, was initiated to document the Gamma Metric 10 CFR Part 21 report concerns. The NCR was reviewed and approved on August 2, 1988.

The NCR received an initial assessment of "operable pending technical evaluation". As a result, the NCR was not resolved in an expeditious manner. Due to unrelated previous problems with resolving NCRs in a timely manner, the NCR procedure has been revised to restrict the use and duration of "operable pending technical evaluation" and to improve the timeliness of NCR issuance.

SCE design engineering personnel were aware of the 10 CFR 21 report and that an NCR was in preparation. They promptly contacted the vendor to research industry reaction. A summary paper, prepared by the design engineering group, was provided to the NCR author. It was SCE's intent that the summary paper serve as the JCO. However, the summary paper was not in the appropriate format and did not contain the requisite information necessary for a formal JCO.

The NCR author relied upon the summary paper when preparing the NCR's 10 CFR 50.59 safety evaluation and attached the summary paper to the NCR. Engineering supervision and Quality Assurance (QA) personnel reviewed and approved the NCR and safety evaluation.

SCE admits the safety evaluation and summary paper improperly credited alternate instrumentation as being equivalent for accomplishing the safety function despite

the fact that none of the listed variables provides real time core reactivity information. Further, the corrective action section of NCR G-0865 Rev. 0 failed to establish administrative controls to provide operators with appropriate compensatory measures in the event the excore neutron monitors failed.

Neither the design engineering personnel nor the NCR author and reviewers (including QA) were adequately trained in preparing or reviewing either the 10 CFR 50.59 safety evaluation or the requisite JCO documentation. As a result of a previous item of noncompliance (reference letter Mr. Kenneth P. Baskin (SCE) to Mr. J. B. Martin (NRC), dated October 8, 1987), SCE developed a special training program, which commenced mid-year 1988, to improve the quality of engineering and technical work/review in NCRs, JCOs and safety evaluations.

On March 23, 1989, NCR G-0865 Rev. 1 was prepared as a result of the NRC's identification of the deficient NCR safety evaluation and JCO. NCR G-0865 Rev. 1 was issued to revise the safety evaluation and the corrective actions.

A formal JCO was also prepared. However, since SCE relies upon the NCR process to identify and initiate corrective action, the JCO did not include a discussion of the NRC's corrective actions.

During a further review by the NRC, the omission of the corrective action from the JCO Rev. 1 was identified. Coupled with several other enhancements, NCR G-0865 Rev. 2 and a revised JCO were issued and found to be acceptable by the NRC.

2. Corrective steps that have been taken and the results achieved.

A Special Order was issued April 14, 1989, to alert operators to the potential for failure of the flux connectors in a post-accident environment. A caution sticker was placed on the equipment in the control room which stated "May fail high during accident conditions" to alert the operators of the potential failure mode. The Units 2/3 Emergency Operating Instructions (EOIs) were revised to direct operators to commence emergency boration upon indications of unexpected increasing reactor power level or inadequate shut down margin.

As stated above, SCE had previously developed a training program to improve the quality of engineering and technical work/review in NCRs and 10 CFR 50.59 safety evaluations. As of February 28, 1989, the training program was considered fully implemented.

Engineering personnel who prepare and review JCOs have been instructed in the requirement to include all applicable corrective actions and administrative controls.

The QA organization is conducting enhanced training of appropriate personnel performing NCR reviews. In addition, the NCR review process has been enhanced to direct NCRs to cognizant QA and Independent Safety Engineering Group (ISEG) engineers.

3. Corrective steps that will be taken to avoid further violations.

The excore neutron flux connectors will be inspected, tested and repaired or replaced as necessary prior to return to service from the next outage of sufficient duration. Completion of this activity will occur no later than the completion of the Cycle 5 refueling outage.

4. Date when full compliance will be achieved.

Full compliance was achieved on April 12, 1989, when NCR G-0865 Rev. 2 and the revised JCO were issued and accepted by the NRC.