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VICE PRESIDENT

March 17, 1989

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U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596-5368

Attention: Mr. John B. Martin, Regional Administrator

Dear Sir:

Subject: Docket No. 50-206
Technical Issues Impacting San Onofre Unit 1 Restart
San Onofre Nuclear Generating Station
Unit 1

Enclosed is a report titled "Safety Assessment, SONGS 1 Restart." This report is being submitted in response to your letters dated January 31, 1989 and February 8, 1989. In your first letter, you expressed concern with SONGS 1 thermal shield integrity and other pending technical issues and stated your understanding that SONGS 1 would not enter Mode 2 until these issues were resolved and your concurrence obtained for restart. In your second letter, specific technical issues were identified along with the actions required to obtain your concurrence for restart. The enclosed report includes an evaluation of all technical issues identified in the February 8, 1989 letter except for Thermal Shield degradation and Steam Generator Tube Slewing. We have also included six additional issues which we consider appropriate for this report. The Thermal Shield and Steam Generator Tube slewing issues do not have potential generic implications as do the others. These two issues have been the subject of separate correspondence and SCE actions relative to the Steam Generator Tube Slewing issue were recently approved by NRC letter dated February 23, 1989.

The causes of the technical issues evaluated in the report can be attributed to several factors. SONGS 1 is a plant of older vintage which was not designed and built to modern criteria. Much of the regulatory guidance which has since established a degree of standardization in the industry was not available for SONGS 1. In addition, the plant was designed with component level redundancy and operational flexibility instead of the train level redundancy and separation concepts developed for later vintage plants. These

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SONGS 1 features (e.g., redundant components in common-header fluid systems, automatic swing busses, safety related power for non-safety related loads) are inherent strengths from the operational and reliability perspectives. Backfitting the plant to meet modern criteria provided a second level of design criteria which has improved the inherent strengths while making the design more complex and difficult to understand.

Other important factors leading to the discovery of these issues are the implementation of actions described in SCE's October 3, 1988 letter regarding improving the quality of engineering and technical support to SONGS. These actions have led to a single focused design engineering organization with dedicated technical management. This new organization has been encouraged to perform work in a more thorough and comprehensive manner which has contributed to the discovery of these issues.

The enclosed report identifies twelve significant technical issues. For each issue, the discovery of the problem is discussed, the root cause is identified and evaluated, immediate and long term corrective actions are identified where necessary, and the safety significance is evaluated. The conclusion reached as a result of the evaluations is that the safety significance in realistic terms of all of the issues is low. The report also serves to confirm the conclusions of our October 3, 1988 letter. That is, the major contributors to these issues are (1) the complexity of the previously existing organization, (2) heavy reliance on engineering contractors combined with inadequate allocation of SCE engineering resources, and (3) the lack of readily accessible design basis documentation. As SCE continues with the programs identified in the October 3, 1988 letter and as the organization matures and becomes more effective, we expect that additional design issues will be identified. Upcoming work by SCE including the development of Design Basis Documentation and reanalysis of the 1976 NUS Single Failure Analysis report will also facilitate the identification of design issues. However, we also believe the safety significance of any additional design issues will be low, similar to the recently discovered issues discussed in this report.

It is our conclusion that the overall impact of the issues identified in the report on the restart of SONGS 1 is of low significance. As identified in the report, the safety significance of each issue is low. Even when taken together, these issues do not present a significant risk to continued operation of SONGS 1. SCE has recently implemented activities that we believe will continue to identify similar issues because of the questioning manner in which work is being performed. While these activities will identify additional issues they will also serve to provide additional confidence regarding the inherent safety of SONGS 1 design and operation. Therefore, it is our judgment that return-to-service of SONGS 1 does not represent an undue risk to the health and safety of the public.

Mr. J. B. Martin

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In order to expedite review of the enclosed report to support restart of SONGS 1, we would like to arrange a meeting within the next few days to discuss the details of the report.

If you need additional information, please contact me.

Very truly yours,

Arnold P. Bush

Enclosure

cc: F. R. Huey, NRC Senior Resident Inspector, San Onofre Units 1, 2 and 3
U. S. Nuclear Regulatory Commission, Document Control Desk