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July 30, 1984

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Director, Office of Nuclear Reactor Regulation
Attention: Mr. D. M. Crutchfield, Chief
Operating Reactors Branch No. 5
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-206
Environmental Qualification
San Onofre Nuclear Generating Station
Unit 1

The environmental qualification rule, 10 CFR 50.49, Section (g), requires that final qualification of electric equipment within the scope of the rule be completed by March 31, 1985. The section further states that the Director of NRR may grant requests for extensions to November 30, 1985 for specific pieces of equipment if these requests are filed on a timely basis and demonstrate good cause for the extension, such as procurement lead time, test complications, and installation problems. The purpose of this letter is to request an extension of the deadline to November 30, 1985 for specific equipment in accordance with 10 CFR 50.49(g). In order to demonstrate the need for an extension, this letter provides a discussion of (1) the background of San Onofre Unit 1 with respect to environmental qualification; (2) the existing program underway for San Onofre Unit 1; (3) the items requiring extension; and (4) justification for the extension.

Background

As you know the NRC's efforts on the issue of environmental qualification have been continuing since the early 1970s. As a licensee since 1967, SCE has responded to each NRC request. The responses were considered acceptable as demonstrated by the NRC SER dated July 18, 1975. As part of the Systematic Evaluation Program, SCE responded to the NRC's request following the UCS petition. The results of the NRC's evaluation are documented in NUREG-0458 dated May, 1978.

In 1980 the NRC's efforts on the environmental qualification issue were increased. This was evidenced by the issuance of IE Bulletin 79-01B on January 15, 1980, the NRC's February 15, 1980 letter to all SEP plants and the issuance of the Commission's May 1980 Order requiring qualification of all safety related electrical equipment by June 30, 1982. In response to both the letter and the order, SCE made submittals on June 18, 1980 and October 31, 1980. These letters, in particular the October 31, 1980 letter, established

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the Environmental Qualification Program for San Onofre Unit 1. SCE made efforts to qualify all electrical equipment in a harsh environment identified in the October 31, 1980 letter by the June 30, 1982 deadline. In order to accomplish this effort, SCE engaged the assistance of two consultants.

Due to the age of the equipment at San Onofre Unit 1, progress by the consultants in obtaining information from vendors was slow and the information was limited. As a result of the initial qualification efforts, it was determined that certain components were either beyond their qualified life or would not perform their required function during an accident. Licensee Event Report No. 81-004 dated May 4, 1981 identified the replacement of non-metallic parts within recirculation flow control valve actuators, regulators and solenoid valves. Licensee Event Report No. 81-006 dated May 18, 1981 identified the replacement of safety-related circuits on terminal blocks inside containment with qualified splices. These reports and the corrective actions were summarized in a letter to the NRC dated May 18, 1981. All of the corrective actions have been implemented.

SCE received the first NRC SER and Franklin TER by letter dated June 21, 1981. The SER listed the equipment into two categories: (1) that equipment requiring additional qualification information and (2) that equipment considered acceptable or conditionally acceptable. SCE responded to the SER by letter dated November 4, 1981. This letter provided an update of the qualification program, indicating which items were considered qualified and those which required additional work. At that time SCE was still proceeding to satisfy the June 30, 1982 deadline.

While the program to implement environmental qualification requirements was progressing, SCE was also undertaking a separate effort to demonstrate compliance with certain seismic design criteria for structures and piping systems on SONGS 1. Because of: (a) the significant cost associated with this effort; (b) the uncertainty as to the final NRC design criteria for these modifications; and (c) the unspecified schedule for costly NRC required backfit modifications to other plant systems, SCE in late 1982 stopped work on SONGS 1 projects, including equipment qualification, until resolution of the above concerns could be accomplished.

By letter dated November 30, 1982 the NRC transmitted the final SER and Franklin TER for San Onofre Unit 1. The SER requested that justification for continued operation be provided for equipment not qualified and for which justification was not previously provided. In SCE's letter dated January 18, 1983 the NRC was informed that justifications were previously provided in the February 24, 1982 submittal. The SER also requested that SCE provide a schedule for qualification or replacement of items not yet qualified. By letter dated February 19, 1983 it was indicated that this information would be provided in response to 10 CFR 50.49(g) of the new environmental qualification rule. In SCE's May 20, 1983 response, it was indicated that the Franklin TER had listed four items as qualified and that all other items would be qualified by the March 31, 1985 deadline. Those items not qualified would either be replaced or a request for extension to complete the qualification would be made.

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At the NRC meeting on December 20, 1983, SCE presented the program necessary to complete the qualification of the equipment. Again, the assistance of a consultant was engaged to assist SCE in the preparation for the NRC meeting and the development of the continuing environmental qualification program. Efforts on the new program began in early 1984. This was due to the time required to reach agreement with the NRC on the conditions for the restart of San Onofre Unit 1. As soon as the agreement was reached, SCE reinitiated the environmental qualification program as presented to the NRC staff at the December 20, 1983 meeting.

Existing Program

The details of the existing qualification program were attached to the NRC's letter dated January 17, 1984 documenting the December 20, 1983 meeting. The program requires additional efforts to obtain qualification data and documents on a number of original equipment items. In general, the effort will require contact with the equipment vendors to correlate test reports, obtain materials lists and develop the qualification documentation which may include test reports and analysis. SCE is proceeding to complete the qualification documentation for all the equipment in the program. It is anticipated that this will be complete by December, 1984 with the exception of 15 items. All the qualification documentation for the qualified electrical equipment will be available by March 31, 1985.

Items Requiring Extension

At this time, fifteen items have been identified which, based on the information gathered to date, are not qualifiable. This includes eleven Asco solenoid valves, three Foxboro flow transmitters and one Foxboro temperature sensor. Due to the age of these items, qualification is not possible, therefore, appropriate measures are being taken to replace these items. These measures include purchasing replacement equipment and installation during the next available outage but no later than November 30, 1985. Based on discussions with vendors, procurement of qualified replacements will take from 6 to 10 months.

Justification For Extension

In order to justify the granting of an extension from the deadline, three enclosures are provided. Enclosure 1 provides a listing of the equipment and documents the justification for continued operation with this equipment. This justification is based on discussions of the specific components, the time frame in which they are required to function if at all and/or the effect of failure of the component on the ability of the system to perform its intended function. Based on these discussions, operation with the existing components until they are replaced should not affect the safety of the plant in the event of an accident. Enclosure 2, Plant Risk Impact Evaluation of Certain Electrical Equipment, is a risk assessment that addresses operation of San Onofre Unit 1 with the unqualified components.

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This evaluation indicates the impact on plant risk is low in the event of failure of the components. Finally, Enclosure 3, Evaluation of the Core Damage Risk Reduction Associated with Seismic Modifications at the San Onofre Nuclear Generating Station, Unit 1, demonstrates the overall improvement in the San Onofre Unit 1 performance during a seismic event, as a result of the seismic backfit modifications. As indicated in the enclosure, the seismic risk has been reduced by about a factor of 35 to 125. The intent of the evaluation is to demonstrate the substantial improvement in safety at San Onofre Unit 1 which has been made during the current outage.

Based on the above information, operation of San Onofre Unit 1 with the installed components will not pose an undue risk to the health and safety of the public. Therefore, providing an extension from the 10 CFR 50.49 deadline for these components is warranted.

If you have any questions regarding this matter, please let me know.

Very truly yours,



Enclosure

cc: E. McKenna, NRC Project Manager