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R. W. KRIEGER
STATION MANAGER

August 9, 1991

Mr. John B. Martin
Regional Administrator
U. S. Nuclear Regulatory Commission, Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596

Subject: Docket No. 50-206
Request for Temporary Waiver of Compliance
Inoperable Level Transmitter - Safety Injection
San Onofre Nuclear Generating Station, Unit 1

Reference: Letter, H. B. Ray (SCE) to USNRC Document Control Desk, Amendment
Application 188, dated August 31, 1990

The purpose of this letter is to request a Temporary Waiver of Compliance for a period of 72 hours from the requirements of Technical Specification (TS) 3.0.3 without fully complying with the requirements of TS 3.3.1, "Safety Injection System and Containment Spray Systems - Operating Status," sections "A(3)", "B(1)" and "B(8)". Verbal approval of this request was obtained from Mr. M. Virgilio (USNRC-NRR) in a telephone discussion with Mr. R. Waldo (SCE) on August 8, 1991.

A. Requirements For Which The Waiver Is Requested:

TS 3.3.1, defines the operability requirements for the Safety Injection System (SIS). The objective of the TS is to ensure availability of the SIS while the reactor is critical. TS 3.3.1, A(3), requires in part, that interlocks associated with the SIS be maintained operable but does not provide an ACTION statement. This specification applies to the Volume Control Tank (VCT) level transmitters which actuate motor operated valves (MOV) as described below on low VCT level to protect the charging pumps from damage due to gas binding as a result of VCT hydrogen, and to assure a continued source of borated water from the Refueling Water Storage Tank (RWST).

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TS 3.3.1, section "B" establishes time limits for certain components to be removed from service for maintenance (similar to the ACTION requirements of the Standard TSs). Section "B" allows one of eight specified components (or groups of components) to be removed from service at a time for a period not longer than 72 hours. Specifically, section B(1) allows one MOV at a time (either MOV 1100B or 1100D) in the recirculation loop upstream of the charging pump suction header to be removed from service; and section B(8) allows one MOV at a time (either MOV 1100C or 1100E) in the VCT outlet line to the charging pump suction to be removed from service.

TS 3.0.3 requires, in part, that when a limiting condition for operation is not met, except pursuant to associated ACTION requirements, unit shutdown shall be initiated within one hour and that the unit be placed in COLD SHUTDOWN in the following 36 hours.

A temporary waiver of the shutdown requirements of TS 3.0.3 was requested in order to avoid an unnecessary plant shutdown which would have been otherwise required since all applicable OPERABILITY and ACTION requirements of TS 3.3.1 for the SIS are not fully satisfied. Specifically, the VCT low level interlock (LT-1100), which actuates MOVs 1100C and 1100D, was removed from service contrary to the requirements of these TSs. This action had the potential, in the event of a single failure of the redundant train, to prevent automatic operation of MOVs 1100C and 1100D on low VCT level. This would preclude: 1) aligning the RWST through the recirculation loop header to the suction of the charging pumps by opening MOV 1100D, and 2) isolation of the VCT from the charging pump suction header by closing MOV 1100C on low VCT level following certain small break Loss of Coolant Accident events in which safety injection actuation would not occur prior to emptying the VCT. The charging pumps could be damaged in the event they are aligned to an empty VCT. Granting this temporary waiver of compliance has the effect of avoiding a plant shutdown while the VCT level transmitter is being restored to operability. During the effective period of the waiver, the other train of required systems and components will continue to be maintained operable as well as all portions of the affected train other than the inoperable level transmitter.

B. Circumstances Surrounding the Situation:

On August 7, 1991 at 1135, with Unit 1 at about 90% power, VCT level transmitter LT-1100 exhibited erratic indication as compared to the opposite train level transmitter LT-2550. Maintenance was initiated on the transmitter at that time. Additionally, the function of the level transmitter was reviewed and compared to potentially applicable TSs. Since the valves were still capable of being repositioned by their respective safety injection initiated contacts, no TS was thought to apply. At about 1700 on August 8th, it was recognized that the inoperable level transmitter was potentially contrary to the requirements of TS 3.3.1, A(3) (i.e., an inoperable interlock). Therefore, shutdown of Unit 1 was initiated at 1800 per the requirements of TS 3.0.3. (Following verbal approval of the waiver request, the unit shutdown was terminated and the unit returned to full power).

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Prompt approval of this temporary waiver of compliance was requested for a period of 72 hours from 1135 on August 7th. Prompt approval would preclude an unnecessary reactor shutdown since it was considered to be safer to maintain the unit in the present configuration during the period required to effect repairs than to place the unit in a shutdown transient. The need for this waiver was unavoidable since failure of the level transmitter could not have been predicted, nor could repairs be completed and the level transmitter demonstrated operable within the one hour TS 3.0.3 action time limit.

C. Compensatory Actions Necessary:

During the effective period of this waiver: 1) all required systems and components of the unaffected train will be maintained operable, and 2) one licensed operator has been dedicated to monitor VCT level and to take action to reposition the 1100 series MOVs should it become necessary.

D. Preliminary Evaluation of the Safety Significance of this Request:

Continued operation with LT-1100 inoperable for a period of 72 hours is of no safety significance for the following reasons:

Unit 1 is provided with two independent and redundant trains of Emergency Core Cooling System (ECCS) (which includes safety injection) including the capability to realign the charging pump suction from the VCT (on low VCT level or safety injection) to the RWST. Either train is capable of mitigating any event requiring the use of the ECCS. These provisions ensure that a single failure could not prevent completion of this aspect of a required safety function. In this regard, SCE has recently completed an ECCS single failure analysis and certain plant upgrades to assure completion of required ECCS functions in the event of a single failure.

Consistent with these changes, SCE had previously concluded that a TS change was appropriate to preclude unnecessary entries into TS 3.0.3. In this regard, the above referenced letter submitted proposed TS changes which would modify the existing TS 3.3.1 and add TS 3.3.2 to be consistent with the Standard TSs for ECCS. This proposed change is currently being reviewed by NRR with SCE and would provide a 72-hour ACTION statement applicable to the present situation with LT-1100. It is our understanding that NRR does not disagree with this aspect of the proposed change.

The allowable out-of-service time (72 hours) being proposed is of minimal safety significance when compared to the risks associated with initiating a plant shutdown for the purposes of repairing the inoperable level transmitter. The risks for the allowable out of service time are also similar to that for any other one-of-two system or component having a 72-hour action statement. Further, the probability of core damage as the result of the inoperability of LT-1100 for up to 72 hours is about $5E-7$ per year.

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The compensatory measures described above provide added assurance that required ECCS functions will be satisfied in the remote event that they are required.

E. Justification for the Duration of the Waiver:

The temporary waiver of compliance was requested and approved for a period of 72 hours, commencing at 1135 on August 7, 1991 and ending at 1135 on August 10, 1991. We believe that this will provide sufficient time to repair LT-1100 and to demonstrate that the level transmitter functions as designed.

The requested duration of this waiver was considered justified since there was no safety significance associated with operation in Mode 1 in this configuration.

F. Basis for No Significant Hazards Conclusion:

10 CFR 50.92 defines that no significant hazards will occur if operation of the facility in accordance with the temporary waiver of compliances does not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or
2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or
3. Involve a significant reduction in a margin of safety.

As previously discussed, the plant is provided with two redundant and independent ECCS trains. The short term inoperability of one of two independent VCT level transmitters does not significantly increase the probability or consequences of an accident previously evaluated; nor create the possibility of a new or different kind of accident from any previously evaluated; nor did it represent a significant reduction in a margin of safety.

G. Basis for No Irreversible Environmental Consequences:

This request does not involve a change in the installation or use of the facilities or components located within the restricted areas as defined in 10 CFR 20. It has been determined that this temporary waiver of compliance involves no significant increase in the amounts, and no significant change in the types of any effluent that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. Accordingly, this temporary waiver of compliance meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the granting of the temporary waiver of compliance.

The San Onofre Nuclear Generating Station Onsite Review Committee has reviewed and approved this Request for Temporary Waiver of Compliance.

Mr. J. B. Martin

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If you have any questions or comments, or if you would like additional information, please let me know.

Sincerely,

A handwritten signature in cursive script, appearing to read "R. P. Zimmerman". The signature is written in black ink and is positioned below the word "Sincerely,".

cc:

R. P. Zimmerman, USNRC, Region V
C. W. Caldwell, USNRC Senior Resident Inspector
George Kalman, USNRC Project Manager, Unit 1
M. Virgilio, USNRC - NRR