



Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATING STATION

P. O. BOX 128

SAN CLEMENTE, CALIFORNIA 92674-0128

R. W. KRIEGER
STATION MANAGER

TELEPHONE
(714) 368-6255

May 13, 1992.

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

92 MAY 15 AM 11:31
RECEIVED
REGION V

Subject: Docket No. 50-206
Request for Temporary Waiver of Compliance
Valve Actuator Maintenance - Safety Injection System
San Onofre Nuclear Generating Station, Unit 1

Reference: Letter, H. E. Morgan (SCE) to USNRC Document Control Desk,
Amendment Application 188, Supplement 2, dated September 9, 1991

The purpose of this letter is to request a Temporary Waiver of Compliance 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(1) and A(3) for a period of 24 hours. Approval of this request will be necessary to avoid an unnecessary power reduction while repairing a nitrogen leak in the actuator of valve HV-852B, associated with the Safety Injection (SI) System, as discussed below. SCE requests that this temporary waiver of compliance commence at 0800 on May 19, 1992 consistent with the scheduled repair of HV-852B.

A. Requirements For Which The Waiver Is Requested:

TS 3.3.1, defines the operability requirements for the SI System (SIS). The objective of this TS is to ensure availability of the SIS while the reactor is critical. TS 3.3.1.A(1) and A(3) require, in part, that two trains of SI and associated valves be operable whenever the reactor is critical, but does not provide an ACTION statement in the event one train or component becomes inoperable.

TS 3.0.3 requires, in part, that when a limiting condition for operation is not met, except pursuant to associated ACTION requirements, a unit shutdown shall be initiated within one hour.

470042

9205280051 920513
PDR ADOCK 05000206
P PDR

TE-01

Unit 1 is provided with two independent trains of SI which, upon actuation, inject borated water from the Refueling Water Storage Tank (RWST) to the Reactor Coolant System using the Main Feedwater Pumps (MFWP).

In order to utilize the MFWPs for SI, each MFWP and its feedwater train are equipped with two pneumatically-hydraulically operated suction and discharge isolation valves which close on SI to isolate the MFWP from its condensate supply and feed water piping. Each corresponding SI train is similarly provided with two pneumatically-hydraulically operated pump suction and discharge isolation valves which open on SI to connect the MFWP suction to the flow path from the RWST, and to connect the MFWP discharge to the SI system.

The MFWP isolation valves have double disc gates with pneumatic/hydraulic actuators having a hydraulically operated piston valve actuator and two accumulators. The accumulators consist of a piston with compressed nitrogen on one side and trapped hydraulic fluid on the other side. The nitrogen is stored in accumulators at pressures between approximately 3150 and 3770 psig to provide the motive force necessary to move the valve actuator to its SI position when the trapped hydraulic fluid under the actuator piston is released to a reservoir. In the event that the accumulator nitrogen pressure drops below approximately 3270 psig, the accumulators are recharged to approximately 3770 psig.

The MFWP feedwater discharge isolation valves (HV-852A and HV-852B) are maintained open during normal operation providing a flowpath to the steam generators. In the event of a SI actuation signal, the valves associated with the feedwater system close, thus isolating flow to the steam generators, and the valves associated with the safety injection system open, thus providing the required SI flow into the reactor coolant system. In the event of a failure of the feedwater discharge valves to close, diversion of SI flow to the steam generators is precluded by automatic closure of redundant safety-grade valves on each steam generator feed line by the SI actuation signal. The feedwater regulating valves, their associated bypass valves (pneumatically actuated), and the feedwater isolation valves (motor operated), achieve closure at approximately $t=10$, 10 and 21 seconds, respectively, following initiation of the SI actuation signal. Safety Injection flow to the RCS is not credited until $t=21$ seconds (by which time the MFWPs have achieved full flow and the MFWP switch over valves have achieved their SI positions).

Recently, the accumulators associated with MFWP feedwater discharge isolation valve HV-852B developed a significant nitrogen leak requiring recharge once every three days. In order to perform the corrective maintenance without placing HV-852B in the closed position, HV-852B would have to be considered inoperable, since during the repair activity it would not close, if required, in response to a safety injection signal. Since no ACTION requirements are provided in TS 3.3.1 for this situation, TS 3.0.3 would be applicable. A reduction of plant power to approximately 10% to 30% would allow the implementation of this repair without reliance on a temporary waiver of compliance of the TS. In this case, the feedwater train associated with HV-852B could be removed from service, allowing the valve to be placed in its safety position during the repair, thus maintaining both trains of SI operable. However, this approach is not preferred since it would require

placing the plant in an unnecessary transient having a potential for: 1) increasing steam generator tube leakage, and 2) increasing the risk of an unplanned reactor trip or plant shutdown while operating at this low power level. As a result, a temporary waiver from the shutdown requirements of TS 3.0.3 is requested for a period not to exceed 24 hours in order to avoid an unnecessary plant power reduction while effecting the repair of HV-852B.

B. Circumstances Surrounding the Situation:

On April 30, 1992, the leakrate of the HV-852B nitrogen accumulators increased such that recharge of the nitrogen accumulator is necessary approximately once every three days. Much of the nitrogen leakage has been identified to be occurring at the nitrogen fill connector (a combination hose connection and check valve) for one of the two accumulators. Smaller leaks were also found at the nitrogen fill connector of the other accumulator and at plugs in both accumulators. Past experience suggests that the leak rate will continue to slightly increase with each recharge until it is not possible to maintain sufficient nitrogen pressure to maintain HV-852B operable.

Since TS 3.3.1 does not currently provide an allowed outage time for the inoperability of one SI train, immediate entry into TS 3.0.3 will be required to perform the necessary maintenance. To prevent unnecessary entries into TS 3.0.3 for situations such as this, a supplemental request to amend the Technical Specifications (Amendment Application No. 188) was previously submitted on September 9, 1991 (see reference). This request is currently being reviewed by SCE and NRR. Section D, below, further describes the proposed changes.

Approval of this temporary waiver of compliance is requested for a period not to exceed 24 hours commencing at 0800 on May 19, 1992, since it is considered safer to maintain the unit in operation at full power during the period required to perform the corrective maintenance rather than to place the unit in a shutdown transient or to take the risk of an unplanned reactor trip.

C. Compensatory Actions Necessary:

During the effective period of this waiver, all required systems and components of the unaffected train including emergency power and the redundant feedwater isolation valves will be maintained operable. Operators will be prepared to assure closure of the feedwater flow diversion paths to the steam generators in the event of a SI actuation. This will be accomplished by 1) verifying closure of the feedwater regulating valves and the feedwater isolation valves, and 2) stationing an operator at one of the manual feedwater isolation valves located downstream of HV-852B to close the valve should closure become necessary. HV-852B will be returned to service as soon as possible following the necessary repairs. In the event that any of the components required for safety injection become inoperable, the requirements of TS 3.0.3 will be implemented.

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

As noted above, all required systems and components of the unaffected train and the redundant feedwater isolation valves needed to prevent SI flow diversion will be maintained operable. In no case would operation beyond the 24 hours, allowed by this temporary waiver request, be permitted without complying with the appropriate LCO 3.0.3 shutdown requirements.

Continued operation of SONGS Unit 1 for a period of 24 hours, while performing repairs on HV-852B, is of no safety significance for the following reasons:

- o Unit 1 is provided with two independent and redundant trains of Emergency Core Cooling System (ECCS). Either train is capable of mitigating any event requiring the use of the ECCS. As discussed above, the alternate train will be maintained fully operable.
- o Consistent with this capability, SCE had previously concluded that a TS change was appropriate to preclude unnecessary entries into TS 3.0.3. In this regard, the referenced letter submitted a proposed TS change which would modify the existing TS 3.3.1 to be consistent with guidance of the Standard TSs (STS) for ECCS. The STS typically allows ECCS components to be inoperable for a 72 hour period. During this time, the single failure criterion is relaxed. It is our understanding that NRR does not disagree with the application of the STS 72-hour ACTION statement to ECCS Components, as contained in the proposed change.
- o A probabilistic risk assessment was performed to provide a best estimate of the increase in core damage risk attributable to this repair. This assessment concluded that work associated with correcting the HV-852B nitrogen leak at nominal full power would result in an incremental increase in mean core damage probability during a 24-hour repair period of approximately $1E-9$. The increase in core damage risk associated with performing the repairs at reduced power would be approximately $5E-8$. Because of the uncertainties associated with each of these probabilities, they are regarded as equivalent.
- o 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 requested duration of this waiver is considered justified since there is no safety significance associated with operation in Mode 1 in this configuration and with the above described compensatory actions. In addition, the requested duration is conservative relative to that allowed by the STS for ECCS, and is consistent with our proposed change to TS 3.3.1 presently under review by the NRC.

May 13, 1992

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 SI trains. Short term inoperability of one of two independent SI trains 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 does it represent a significant reduction in a margin of safety.

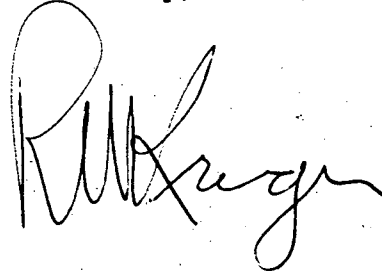
G. Basis for No Irreversible Environmental Consequences:

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.

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

Sincerely,



cc:

- R. P. Zimmerman, USNRC, Region V
- George Kalman, NRC Senior Project Manager, San Onofre Unit 1
- J. O. Bradfute, NRC Project Manager, San Onofre Unit 1
- C. W. Caldwell, NRC Senior Resident Inspector, San Onofre Units 1, 2&3