

REGULARY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: B607140178 DOC. DATE: 86/07/11 NOTARIZED: NO DOCKET #  
 FACIL: 50-362 San Onofre Nuclear Station, Unit 3, Southern California 05000362  
 AUTH. NAME AUTHOR AFFILIATION  
 MEDFORD, M. O. Southern California Edison Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 KNIGHTON, G. W. PWR Project Directorate 7

SUBJECT: Application for amend to License NPF-15, revising Tech Specs to add Cycle 2 specific borated water source requirements & revising Amend 32 effective date. Fee paid.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 7+7  
 TITLE: OR Submittal: General Distribution

NOTES: ELD Chandler 1cy.

05000362

RECIPIENT		COPIES		RECIPIENT		COPIES	
ID CODE/NAME		LTTR	ENCL	ID CODE/NAME		LTTR	ENCL
PWR-B EB		1	1	PWR-B PEICSB		2	2
PWR-B FOB		1	1	PWR-B PD7 LA		1	0
PWR-B PD7 PD 01		5	5	ROOD, H		1	1
PWR-B PEICSB		1	1	PWR-B RSB		1	1
INTERNAL: ACRS	09	6	6	ADM/LFMB		1	0
ELD/HDS2		1	0	NRR/ORAS		1	0
<u>REG FILE</u>	04	1	1	RGN5		1	1
EXTERNAL: EG&G BRUSKE, S		1	1	LPDR	03	1	1
NRC PDR	02	1	1	NSIC	05	1	1

NOTES:

1 1

Rec'd w/check

NPF-15

*Southern California Edison Company*



P. O. BOX 800  
2244 WALNUT GROVE AVENUE  
ROSEMEAD, CALIFORNIA 91770

M. O. MEDFORD  
MANAGER, NUCLEAR LICENSING

TELEPHONE  
(818) 302-1749

Director, Office of Nuclear Reactor Regulation  
Attention: Mr. George W. Knighton, Director  
PWR Project Directorate No. 7  
Division of PWR Licensing - B  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-362  
San Onofre Nuclear Generating Station  
Unit 3

By letter dated March 27, 1986, the NRC issued Amendment Nos. 43 and 32 to the Units 2 and 3 Operating Licenses. Amendment No. 32 approved Proposed Change PCN-200. PCN-200 revised borated water source requirements for Cycle 3 operation and allowed boric acid concentrations to be reduced to the point where heat tracing is no longer required for the chemical and volume control system.

Satisfying the operability requirements for heat tracing has presented a significant maintenance burden. Approval of PCN-200 relieved this burden for Unit 2 which is now operating in Cycle 3. Considerable benefit can be gained by removing heat tracing on Unit 3, as soon as possible, for the remainder of Cycle 2.

Enclosed for your review and approval is a proposed change to the Unit 3 Technical Specifications which would add Cycle 2 specific borated water source requirements for Unit 3 and revise the effective date of Amendment No. 32 to allow its implementation for the remainder of Cycle 2. Timely review and approval of this proposed change is requested to allow implementation of the boric acid concentration reduction program and removal of heat tracing for the remainder of Cycle 2 operation of Unit 3. Cycle 2 is currently expected to end on approximately December 1, 1986.

8607140178 860711  
PDR ADDOCK 05000362  
P PDR

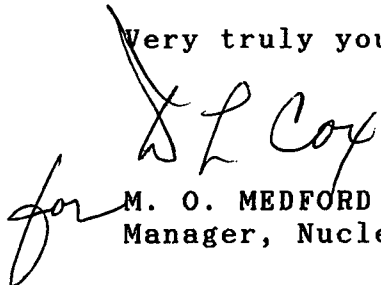
*Rec'd w/ check*

*Asst  
1/1*

In accordance with 10 CFR 170.12, the \$150 amendment application fee is enclosed. A formal request for this change will be included in our next formal amendment application.

If you have any questions regarding the enclosed information, please call me.

Very truly yours,

  
M. O. MEDFORD  
Manager, Nuclear Licensing

PWSmith:lh  
Enclosures

cc: H. Rood, NRC Project Manager (to be addressed by  
addressee only)  
J. B. Martin (Regional Administrator, NRC Region V)  
J. O. Ward, California Department of Health Services  
F. R. Huey (USNRC Senior Resident Inspector)

cc: See attached

DESCRIPTION AND SAFETY ANALYSIS  
OF PROPOSED CHANGE NPF-15-219

This is a request to revise Technical Specifications 3/4.1.2.7, "Borated Water Sources-Shutdown," 3/4.1.2.8 "Borated Water Sources-Operating" and the effective date for Amendment No. 32 to Operating License, NPF-15.

Existing Specifications:

Unit 3: See Attachment A

Proposed Specifications:

Unit 3: See Attachment B

Description

Amendment No. 32 to the Unit 3 Operating License, which was issued by NRC letter dated March 27, 1986, approved Technical Specification Change PCN-200. PCN-200 revised Technical Specification 3/4.1.2.1 "Boration Systems Flow Paths - Operating," Technical Specification 3.4.2.1.7 "Borated Water Sources - Shutdown," Technical Specification 3/4.1.2.8 "Borated Water Sources - Operating," and Technical Specification 3/4.5.4 "Refueling Water Storage Tank." These specifications define the volume and concentration of boric acid to be maintained in the refueling water storage tank and boric acid makeup tanks, and the flow paths from these borated water sources to the reactor coolant system required during various modes of plant operation. PCN-200 reduced the maximum boric acid makeup tank concentration to allow elimination of heat tracing, defined the flow paths required to achieve safe shutdown and revised BAMU tank concentrations to requirements for Cycle 3 operation. Amendment No. 32 approved PCN-200 to be effective at the beginning of Cycle 3 consistent with the BAMU tank concentration requirements.

BAMU tank concentration and volume requirements are specified in Figure 3.1-1. The figure approved by Amendment No. 32 applies only to Cycle 3. The proposed change would incorporate an additional Figure 3.1-1 applicable for the remainder of Cycle 2 and would make the changes approved by Amendment No. 32 effective upon approval of the proposed Cycle 2 figure. Additionally, Specification 3/4.1.2.7 is revised to specify that the minimum volume to be maintained in the RWST for the remainder of Cycle 2 when the plant is in cold shutdown or refueling is 7150 gallons. The associated Bases Section is also revised to include Cycle 2 values. This will permit full advantage of the boric acid concentration reduction, including the removal of heat tracing, to be implemented on Unit 3 for the remainder of Cycle 2.

Safety Analysis

The proposed change described above shall be deemed to involve significant hazards considerations if there is a positive finding in any area of the following areas:

1. Will operation of the facility in accordance with this proposed change involve a significant increase in the probability or consequences of any accident previously evaluated?

Response: No

The proposed change revises BAMU tank concentration and volume requirements to be applicable for the remainder of Cycle 2. The methodology described in CEN-316, "Boric Acid Makeup Tank Concentration Reduction Effort," was applied using Cycle 2 physics data. This is the same methodology used for PCN-200 which was approved by Amendment No. 32.

Borated water sources and flow paths are credited in the analysis of the small break LOCA. In the event of a LOCA, a safety injection actuation signal (SIAS), in addition to starting the high and low pressure safety injection (HPSI and LPSI) pumps, starts the charging pumps, BAMU pumps and opens valves in the gravity feed and BAMU pump flow path from the BAMU tanks. The small charging flow (approximately 36 gpm) is credited in the small break LOCA analysis to augment the HPSI flow of approximately 650 gpm. The charging pumps take suction from the BAMU tanks on an SIAS. Thus, the required volume must be sufficient to supply the charging pumps during the event. The volume required from a safety injection standpoint is essentially independent of fuel cycle. The minimum BAMU tank volume approved in Amendment No. 32 for Cycle 3 operation is 5450 gallons. The proposed Cycle 2 minimum volume is 6700 gallons. The larger volume is required for reasons other than the small break LOCA as described below. Therefore, the proposed change ensures that the minimum volume requirements for the BAMU tanks is sufficient for injection by the charging pumps during a small break LOCA and does not affect the probability or consequences of the small break LOCA.

Borated water from the BAMU tanks and RWST are required for reactivity control and makeup during cool down. The limiting cooldown scenario is that analyzed to demonstrate conformance with Branch Technical Position RSB 5-1. This scenario assumes that letdown is unavailable, a loss of offsite power, and the limiting single failure. Sufficient borated water must be available to maintain shutdown margin and makeup for RCS shrinkage during cooldown. The proposed Figure 3.1-1 was developed from the same methodology as was used for the Cycle 3 Figure 3.1-1 approved by Amendment No. 32 using Cycle 2 specific physics data. The lower end-of-cycle

average burnup in Cycle 2 from that calculated for Cycle 3 results in the higher volume/concentration required for Cycle 2. The proposed Cycle 2 Figure 3.1-1 ensures that concentration and volume requirements are sufficient to maintain reactivity control during the cooldown scenario for Cycle 2. Therefore, the proposed change does not adversely affect the safe shutdown analysis.

2. Will operation of the facility in accordance with this proposed change create the probability of a new or different kind of accident from any accident previously evaluated.

Response: No

The proposed change does not physically alter the configuration of the plant and therefore does not create the probability of a new or different kind of accident from any previously evaluated.

3. Will operation of the facility in accordance with this proposed change involve a significant reduction in a margin of safety?

Response: No

As described in the response to Question 1 above, the proposed change maintains sufficient inventory in the BAMU tanks to satisfy the assumption of the small break LOCA analysis and the safe shutdown scenario.

The Commission has provided guidance concerning the application of standards for determining whether a significant hazards consideration exists by providing certain examples (48 FR 14870) of amendments that are considered not likely to involve significant hazards considerations. Example (iii) relates to a change for a nuclear power reactor resulting from a core reloading if no fuel assemblies are significantly different from those found previously acceptable to the NRC. This assumes that no significant changes are made to the acceptance criteria for the Technical Specification and that the analytical methods used to demonstrate conformance with Technical Specifications and regulations are not significantly changed and that the NRC has previously found such methods acceptable. The proposed change revises boric acid makeup tank requirements to be consistent with a specific cycle of plant operation (Cycle 2). The NRC had previously approved the methodology used and specific borated water source requirements for Cycle 3 by Amendment No. 32. Because the proposed change uses identical analytical methodology to that previously approved and maintains the same acceptance criteria for the Technical Specification values generated, the proposed change is similar to Example (iii).

Safety and Significant Hazards Determination

Based on the above Safety Analysis, it is concluded that: (1) the proposed change does not constitute a significant hazards consideration as defined by 10 CFR 50.92; and (2) there is a reasonable assurance that the health and safety of the public will not be endangered by the proposed change; and (3) this action will not result in a condition which significantly alters the impact of the station on the environment as described in the NRC Final Environmental Statement.

ATTACHMENT "A"

EXISTING SPECIFICATIONS