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A. Edward Scherer
Director
Nuclear Regulatory Affairs

March 27, 2008

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: **Docket No. 50-362**
Response to NRC Request for Additional Information in support of Amendment Application No. 236, Proposed Change Number (PCN) 582 Technical Specification (TS) 5.5.2.15 Containment Leakage Rate Testing Program, San Onofre Nuclear Generating Station, Unit 3

Reference: Letter from N. Kalyanam (NRC) to Richard M. Rosenblum (SCE) dated February, 11, 2008; *Subject: San Onofre Nuclear Generating Station, Unit 3 - Request for Additional Information on License Amendment Request for One-Time Extension from the Currently Approved 15-year Interval Since the Last Integrated Leak Rate Test (TAC No. MD6835)*

Dear Sir or Madam:

By letter dated February 11, 2008, (Referenced above), the U.S. Nuclear Regulatory Commission issued a request for additional information regarding Proposed Change Number (PCN) 582. Please find the Southern California Edison (SCE) responses enclosed.

SCE has evaluated the supplemental information under the standards set forth in 10 CFR 50.92 (c) and determined that SCE's original finding of "No significant hazards consideration" is not changed.

There are no commitments contained in either this letter or the enclosure.

P.O. Box 128
San Clemente, CA 92674

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NRR

If you have any questions or require additional information, please contact Ms. Linda T. Conklin at (949) 368-9443.

Sincerely,

Enclosure: As stated

cc: E. E. Collins, Regional Administrator, NRC Region IV
N. Kalyanam, NRC Project Manager, San Onofre Units 2 and 3
C. C. Osterholtz, NRC Senior Resident Inspector, San Onofre Units 2 and 3
S. Y. Hsu, California Department of Public Health, Radiological Health Branch

Southern California Edison (SCE)

San Onofre Nuclear Generating Station (SONGS), Units 2 and 3

Docket No. 50-362

Enclosure

Responses to NRC Staff Questions Regarding Proposed Change Notice (PCN) 582

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Proposed Change Notice (PCN) 582

NRC Question 1:

The U. S. Nuclear Regulatory Commission (NRC) staff's review of the Southern California Edison (the Licensee) letter dated September 24, 2007, indicates that refueling outage (RFO) 16 will end in the first quarter of 2011. In Technical Specification Section 5.5.2.15, you are requesting to change the integrated leak rate test (ILRT) date to September 9, 2011. The staff notes that you do not need more than a 7-month extension (April 2011). Please clarify the intent of requesting a 1-year extension for performing the next ILRT.

Response to Question 1:

When Southern California Edison (SCE) submitted Proposed Change Notice 582 on September 24, 2007, SCE was planning to begin the Unit 3 Cycle 16 refueling outage (RFO-16) in October of 2010. Because this proposed change request was more than 3 years in advance of the then scheduled start date, SCE decided to anticipate the impact of any unplanned forced outage would have on the planned October start date.

SCE performed the analysis to justify a 1-year extension, which is consistent with the precedent listed in Section 8.0 of Proposed Change Notice (PCN) 582. This justification will support any unplanned schedule slippage up to 1 year, eliminating the need to make an additional request for an extension had SCE only requested a 1 or 2 month extension to reach an October start date.

Barring any unforeseen circumstances, SCE is planning, and expects to begin Unit 3 RFO-16 during the middle of October 2010. As required by the proposed Technical Specification, SCE will perform the ILRT prior to Unit 3 entering Mode 4 on the return to service.

NRC Question 2:

For the San Onofre Nuclear Generating Station, Unit 3 (SONGS 3) containment, leak-tight integrity is provided by the metallic liner and structural integrity is provided by the post-tensioned concrete structure. Containment structural integrity is essential to ensuring its leak-tight integrity. If the post-repair containment pressure (integrity) test and the next periodic ILRT are to be performed in combination during RFO 16, please outline the main characteristics of the pressurization process and the extended surface examinations, additional examinations during pressurization, and measurements of structural response to pressure of the affected areas/components of the post-repair containment structure, required by IWL-5250 of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), that SONGS Unit 3 plans to conduct during the combined test. Also, please address how these examinations and the ILRT will be relatively scheduled/sequenced during the combined test.

Response to Question 2:

The next periodic ILRT is proposed to be performed in combination with the post-repair containment pressure (integrity) test during RFO-16.

The main outline characteristics of the pressurization process for the combined post-repair test and ILRT Pressurization consists of five phases:

1. Pressurization to test pressure
2. Stabilization at test pressure,
3. ILRT measurements at test pressure,
4. ILRT Leakage Rate Verification at test Pressure
5. Depressurization to ambient pressure condition.

Test pressure is required to be above the Design Basis Accident (DBA) specified in the Technical Specification but below the containment design pressure. For San Onofre Unit 3, the DBA pressure is currently 56.5 psig and the containment design pressure is 60 psig and the test pressure is typically maintained between 57.7 and 58.7 psig. Based on a review of the past three Unit 3 ILRT tests (Nov 1985, March 1992, and September 1995), the average duration for the Pressurization phase is about 20 hours, the Stabilization phase about 8 hours, the ILRT measurement phase about 14 hours, the ILRT Leak Rate Verification phase about 5 hours, and the Depressurization phase about 10 hours.

Additionally, analyses of the impact of the replacement steam generators on loss of coolant accident and main steam line break containment peak pressure and temperature indicate that Technical Specification 5.5.2.15, Containment Leakage Rate Testing Program, is affected due to lowered peak pressure results. SCE will be submitting a license amendment request to revise TS 5.5.2.15 in support of the steam generator replacement project. Upon NRC approval of that license amendment request, the ILRT test pressure will be lowered accordingly.

Edison is currently preparing the Engineering Change Packages for the proposed temporary construction opening in the containment structure. At this time, the augmented examinations and measurements that are planned to be performed in conjunction with the ILRT will consist of the following:

1. Concrete general visual examination of the entire accessible containment exterior surface area, including the repaired area, prior to pressurization,
2. Concrete detailed visual surface area examination of the repaired exterior area at the test pressure,
3. Concrete general visual surface examination of the entire accessible containment exterior surface area following depressurization.
4. End Cap visual inspections of all tendons following depressurization for deformations and/or corrosion protection material leakage.

The surface area examinations will be performed in accordance with IWL-2310(b). SCE anticipates that no measurements of structural response will be necessary because the repair will fully restore the structure to its original design.

Edison also plans to perform subsequent examinations in accordance with IWL 2521.2 and Table IWL-2521-2. Upon completion of restoration activities, new surveillance acceptance criteria will be established for affected tendons based on their actual installation lift-off results and computed time dependent losses in accordance with the existing methods of evaluation.

NRC Question 3:

In order to create the containment construction openings (breach) required to facilitate steam generator (SG) replacement, the staff understands that a significant number of the tendons will be removed/de-tensioned and then reinstalled/re-tensioned after completion of SG replacement. Please identify the governing code and/or criteria for SONGS Unit 3's inspection program following the post-tensioning system repair/replacement activity for examination of tendons that will be affected by such major repair/replacement activity. The use of the process established in Subsection IWL-2521.2 of ASME Code, Section XI 2002 Addenda has been accepted by the NRC in 10 CFR 50.55a of Title 10 of the Code of Federal Regulations (10 CFR).

Response to Question 3:

The first paragraph of PCN 582, page 5 of 18, states: "The initial 120-month inspection interval for the Containment ISI began on September 9, 1998, and will end on September 8, 2008. Successive 120-month intervals will comply with 10CFR 50.55a(g)(4)(ii)."

To comply with 10CFR 50.55a(g)(4)(ii) SCE is required to adopt the latest edition and addenda of the ASME Code Edition and Addenda listed in 10CFR 50.55a(b)(2), 12 months before the start of the 120-month inspection interval subject to the limitations and modifications listed in 50.55(b)(2)(viii) and (ix).

Based on the above Code of Federal Regulation requirements, SCE will update the San Onofre Unit 3 containment Inservice Inspection program (ASME Section XI Subsection IWE and IWL) to the 2001 Edition through the 2003 Addenda. The steam generator replacement activities related to containment i.e., Subsection IWE and IWL during Cycle 16 will be performed in accordance with the requirements specified in the 2001 Edition through the 2003 Addenda of the ASME Code.