

June 17, 2009

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Subject: **Docket No. 50-361**  
**Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" San Onofre Nuclear Generating Station, Unit 2**

- References:
1. NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" dated January 11, 2008
  2. October 14, 2008 letter from M. P. Short (SCE) to Document Control Desk (NRC), Subject: Nine-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," San Onofre Nuclear Generating Station, Units 2 and 3
  3. April 17, 2009 letter from M. P. Short (SCE) to Document Control Desk (NRC), Subject: Revision to Commitment Completion Date and additional information associated with NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," San Onofre Nuclear Generating Station, Units 2 and 3

Dear Sir or Madam:

The Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01 (Reference 1) to request that each licensee evaluate the licensing basis, design, testing, and corrective actions for the emergency core cooling, decay heat removal, and containment spray systems to ensure that gas accumulation is maintained less than the amount that challenges operability of these systems, and that appropriate action is taken when conditions adverse to quality are identified.

As required by Reference 2, Attachment 2, Corrective Action 7, please find attached Southern California Edison's (SCE's) Nine-Month supplemental response for Unit 2.

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This supplemental response is being submitted within 120 days after completion of the Unit 2 outage as discussed in Reference 3. Other corrective actions identified in Reference 2 are being tracked by SCE's Corrective Action Program.

In summary, SCE has concluded that the subject systems at San Onofre Nuclear Generating Station (SONGS) remain operable and that SONGS is currently in compliance with the licensing basis documentation and applicable regulations, including 10 CFR 50 Appendix B, Criteria III, V, XI, XVI, and XVII, with respect to the concerns outlined in GL 2008-01 regarding managing gas accumulation in these systems/functions.

This letter contains no regulatory commitments.

Should you have any questions, please contact Ms. Linda Conklin at (949) 368-9443.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 6/17/2009  
(Date)



Attachment 1: Unit 2 Nine-Month Supplemental (Post-Outage) Response to NRC Generic Letter 2008-01

cc: E. E. Collins, Regional Administrator, NRC Region IV  
R. Hall, NRC Project Manager, San Onofre Units 2 and 3  
G. G. Warnick, NRC Senior Resident Inspector, San Onofre Units 2 and 3

**Unit 2 Nine-Month Supplemental (Post-Outage) Response to  
NRC Generic Letter 2008-01**

This attachment provides the Unit 2 Nine-Month Supplemental (Post-Outage) Response to Generic Letter (GL) 2008-01 as committed to in Reference 2 of the cover letter, Attachment 2, Corrective Action 7:

“SCE will conduct confirmatory walkdowns as identified in Item 6 of the Design Evaluation for Unit 2 accessible and inaccessible piping and submit a Nine-Month supplemental response with the results of these walkdowns and any resulting corrective actions.”

The following information is provided in this attachment:

A description of the results of the previously incomplete system piping walkdowns at San Onofre Nuclear Generating Station (SONGS). See Section A, Item 2, of this attachment.

The original conclusions documented in the Nine-Month Response with respect to the licensing basis evaluation, testing evaluations, and corrective action evaluations have not changed. This supplement will only discuss the results of design evaluation reviews conducted during and following the Unit 2 mid-cycle outage (which completed February 18, 2009) associated with previously uncompleted activities.

## **A. EVALUATION RESULTS**

### **1. Design Basis Documents**

Updated information for Design Basis Documents was provided in Reference 3.

### **2. Confirmatory Walkdowns for Unit 2**

As a method to confirm slope assumptions used in the piping evaluation, Southern California Edison (SCE) committed to performing confirmatory walkdowns on selected piping runs in the Emergency Core Cooling (ECCS), Containment Spray (CS), and Shutdown Cooling (SDC) systems. SCE used laser scanning on piping runs that have the greatest influence on the evaluation documented in Reference 2. Additionally, SCE indicated that piping runs that have a low influence on the evaluation would be sampled to ensure a representative portion of all piping runs were analyzed.

Screening criteria was developed to select lines for field measurements based upon the assumed piping slopes and resultant void volumes used in the evaluation. This ensured that the lines having the greatest impact on the evaluation were measured. Additionally, due to the relatively low threshold of the screening criteria, some lines included have a low influence on the evaluation, such as small diameter discharge lines. Utilizing these criteria, SCE confirmed the slope assumptions used in the piping evaluation for approximately forty percent (by length) of the piping in the three systems.

The rooms of the piping selected by the screening criteria were scanned using a Photon Three-Dimensional Laser Scanning device. The device was set up in multiple locations throughout the respective rooms and 360-degree scanning was performed on the piping runs. The scans were compiled and assembled into three-dimensional models. The piping was then isolated from the three-dimensional model and converted into best-fit cylinders. The cylinders were then analyzed at one-foot intervals to identify offset and slope of the piping run. The total slope and section offset were then compared to the assumptions used in the piping evaluation.

The results of the laser scanning field measurements were within the acceptance criteria. The measurements indicate that all actual void volumes are less than the void volumes assumed in the evaluation previously completed for the GL. This indicates that the operability of the ECCS and CS pumps are not challenged by these potential void volumes in the system using the criteria outlined in Reference 2. In addition, all piping, pipe supports, and hangers on the discharge are not challenged by these potential voids in the system. Therefore, the void volume analysis bounds the as-built configuration of SONGS Unit 2.

**3. Vent Valves**

There are no changes from the information provided in Reference 2.

**4. Procedures**

There are no changes from the information provided in Reference 2.

**B. DESCRIPTION OF NECESSARY ADDITIONAL CORRECTIVE ACTIONS**

There are no changes from the information provided in Reference 2.

**Conclusion**

Based on the conclusion of the confirmatory walkdowns discussed above, the results of the previously completed evaluations for the GL as documented in Reference 2 are unchanged. Therefore, SCE has determined that the applicable systems at SONGS that perform the functions described in the GL remain operable.