

April 12, 2016

10 CFR 50.90

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

Subject: **Docket Nos. 50-361 and 50-362  
Correction and Clarification regarding  
Amendment Applications 270 and 255  
Proposed Changes to Specific Regulatory Guide Commitments  
San Onofre Nuclear Generating Station, Units 2 and 3**

- References: 1) Letter from T. J. Palmisano (SCE) to the U. S. Nuclear Regulatory Commission (NRC) dated August 20, 2015; Subject: Docket Nos. 50-361 and 50-362, Amendment Applications 270 and 255, Proposed Changes to Specific Regulatory Guide Commitments, San Onofre Nuclear Generating Station, Units 2 and 3 (ADAMS Accession No. ML15236A018)
- 2) Letter from J. Kay (SCE) to Document Control Desk (NRC) dated November 19, 2015; Subject: Response to a Request for Additional Information Regarding Amendment Applications 270 and 255, Proposed Changes to Specific Regulatory Guide Commitments, San Onofre Nuclear Generating Station, Units 2 and 3 (ADAMS Accession No. ML15327A410)
- 3) Letter from J. Kay (SCE) to Document Control Desk (NRC) dated January 12, 2016; Subject: Response to a Second Request for Additional Information Regarding Amendment Applications 270 and 255, Proposed Changes to Specific Regulatory Guide Commitments, San Onofre Nuclear Generating Station, Units 2 and 3 (ADAMS Accession No. ML16014A376)
- 4) Letter from M. Vaaler (NRC) to T. J. Palmisano (SCE) dated March 11, 2016; Subject: San Onofre Nuclear Generating Station, Units 2 and 3 – Issuance of Amendments Modifying Licenses to Allow Changes to Specific Regulatory Guide Commitments (ADAMS Accession No. ML16055A522)

ADD  
NRR

Dear Sir or Madam:

By letter dated August 20, 2015 (Reference 1), as supplemented by letters dated November 19, 2015 and January 12, 2016, (References 2 and 3), Southern California Edison (SCE) submitted a License Amendment Request (LAR), consisting of Amendment Applications Nos. 270 and 255, to Facility Operating License Numbers NPF-10 and NPF-15 for San Onofre Nuclear Generating Station (SONGS) Units 2 and 3, respectively. The LAR proposed to revise the Updated Final Safety Analysis Report (UFSAR) to revise specific Regulatory Guide commitments.

By letter dated March 11, 2016 (Reference 4), the NRC issued Amendments 233 and 226 for SONGS Units 2 and 3 as a result of SCE's request. As part of the review of the associated Safety Evaluation, SCE has noted items that need correction or clarification. In one case, the information in the Safety Evaluation was based on incorrect information that was provided by SCE in Reference 1.

The Enclosure to this letter provides a discussion of each of these issues and proposes a correction or clarification as appropriate. SCE proposes that the NRC consider the suggested changes and provide an update to the Safety Evaluation for Amendments 233 and 226.

There are no new regulatory commitments in this letter or the Enclosure.

If you have any questions or require any additional information, please contact me at (949) 368-7418.

Sincerely,

A handwritten signature in black ink that reads "J.G. Kay". The signature is written in a cursive style with a large, looped initial "J" and a distinct "G" and "K".

Enclosure: Corrections and Clarifications to NRC Safety Evaluation

cc: M. L. Dapas, Regional Administrator, NRC Region IV  
M. G. Vaaler, NRC Project Manager, SONGS Units 2 & 3  
S. Y. Hsu, California Department of Public Health, Radiologic Health Branch

**ENCLOSURE**

**CORRECTIONS AND CLARIFICATIONS RELATED TO AMENDMENTS 233 AND 226**

**SAN ONOFRE UNITS 2 AND 3**

## Corrections and Clarifications regarding Amendments 233 and 226

By letter dated August 20, 2015, as supplemented by letters dated November 19, 2015 and January 12, 2016, Southern California Edison (SCE) submitted a License Amendment Request (LAR), consisting of Amendment Applications Nos. 270 and 255, to Facility Operating License Numbers NPF-10 and NPF-15 for San Onofre Nuclear Generating Station (SONGS) Units 2 and 3, respectively. The LAR proposed to revise the Updated Final Safety Analysis Report (UFSAR) to revise specific Regulatory Guide commitments.

By letter dated March 11, 2016, the NRC issued Amendments 233 and 226 for SONGS Units 2 and 3 as a result of SCE's request. As part of the review of the associated Safety Evaluation, SCE has noted items that need correction or clarification.

1. In the November 19, 2015 supplement, SCE responded to NRC questions regarding management of leakage through the spent fuel pool liner resulting from a design basis cask drop or light load handling accidents and made the following statements:

"The SONGS UFSAR also notes that "Control of liquid leakage from [the] SFP is maintained by a system of leak chases which are placed behind the spent fuel pool liner plates. The leak chases are connected to drain lines that terminate in the leak detection sump. Observance of leakage from a drain line will allow identification of the general location of the leak..."

"...Any leaks (from corrosion or other causes) into a leak chase would be limited to approximately 50 gpm based on their cross-sectional area. Such leaks would be expected to start much slower and be detected well before reaching even that flow rate, which is well within SFP makeup capability. Finally such small leaks can be mitigated by shutting the leak chase drain valves if and when it was appropriate to do so."

The NRC relied on this information in the Safety Evaluation for Amendments 233 and 226, stating:

"The licensee determined that leakage into the leak chases would be limited to about 50 gallons per minute based on the cross-sectional area of the chases and drain piping. The licensee determined that a non-mechanistic 50 gallon per minute leak would require about 70 hours to drain the SFP and connected cask pool and transfer pool water levels to an elevation 10 feet above the stored fuel, which still provides ample shielding and cooling of the stored fuel. Furthermore, liner leaks can be mitigated by shutting the leak chase drain valves if and when appropriate. Therefore, liner leakage would not require immediate availability of make-up water to maintain safe storage of the fuel."

As part of SCE's review of the Safety Evaluation, it has been determined that the statement regarding leak chase drain valves is inaccurate. While the configuration of the leak pipes is such that they can be mechanically plugged, no valves presently exist in the piping. In the January 12, 2016, response, SCE estimated that based on the 50 gpm maximum leak rate without termination of the leak the time required to drain the pool to 10 feet would be approximately 70 hours. This statement remains true and supports the conclusion that ample time is available to align a makeup

system and that the system would have sufficient capacity to mitigate any potential liner leakage.

SCE proposes that the NRC revise the Safety Evaluation to delete the sentence referring to leak chase drain valves. The fact that inaccurate information was provided to the NRC in SCE's November 19, 2015 submittal has been entered into the SCE Corrective Action Program.

2. In the January 12, 2016 response to NRC questions, SCE provided a discussion of how the design feature of prevention of draining or siphoning the spent fuel pool below 23 feet above the top of the fuel was maintained. As part of that discussion, SCE stated that:

"While the current system [Spent Fuel Pool Cooling] is in operation, the suction line has to remain available." The purpose of this statement was to show that this line was needed at least until the Spent Fuel Pool Cooling system was retired. SCE did not intend to imply that the piping would be removed, and therefore unavailable; or that it would not be re-purposed following retirement of the Spent Fuel Pool Cooling System. In fact, this line is used for the injection path for the Spent Fuel Pool Makeup System. In addition, the pressure transmitters used for Control Room indication of SFP level are located in this line. Refer to Sketch 1 in the November 19, 2015 submittal which shows this alignment to the suction piping.

In the March 11, 2016 Safety Evaluation, the NRC made the following statement:

"The licensee stated that this [Spent Fuel Pool Cooling suction] piping will no longer be used once the ISFPCS [Independent Spent Fuel Pool Cooling System] is fully in service."

The purpose of this statement in the Safety Evaluation was to document the reviewer's conclusion that the Spent Fuel Pool would be protected against siphoning and draining events and other spent fuel pool inventory loss during design basis events. Although this suction piping will not be removed from service following transition to the ISFPCS, the risk of siphon from this source remains low by design. The entire un-isolated piping run is designed to Seismic Category I requirements. This piping is stainless steel, rated at 150 psig, and is Quality Class III AQ (augmented quality). All isolation valves are manual and not subject to spurious opening. The bottom elevation of the line as it enters the SFP is at elevation 54'-3", more than 21 feet above the top of fuel.

SCE proposes that the NRC revise the Safety Evaluation to remove the statement that the Spent Fuel Pool Cooling system suction line will no longer be used once the ISFPCS is fully in service.

3. In the August 20, 2015 request, SCE discussed in Section 3.1 of the proposed change that any leakage resulting from failure of the primary piping would not be lost but would be spilled back on to the Spent Fuel Pool operating deck(s) and return to the pools. While it is true that leakage onto the operating deck(s) could potentially return to the pool, it is more likely that such leakage would collect and drain through floor drains to the Fuel Handling Building sump. This information was not described in the NRC's Safety Evaluation and no changes to the SER are necessary.