

October 23, 1995

Mr. Harold B. Ray  
Senior Vice President  
Southern California Edison Company  
San Onofre Nuclear Generating Station  
P.O. Box 128  
San Clemente, California 92674-0128

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - GENERIC LETTER 95-03,  
"CIRCUMFERENTIAL CRACKING OF STEAM GENERATOR TUBES" (TAC NOS. M92271  
AND M92272)

Dear Mr. Ray:

On April 28, 1995, the U.S. Nuclear Regulatory Commission issued Generic Letter (GL) 95-03 "Circumferential Cracking of Steam Generator Tubes" which requested addressees to evaluate recent operating experience related to circumferential cracking, justify continued operation until the next scheduled steam generator tube inspections, and to develop plans for the next steam generator tube inspections. The staff has reviewed the June 27, 1995, response provided by Southern California Edison for the San Onofre Nuclear Generating Station, Units 2 and 3. As a result of the review of your response, the staff has identified areas for which additional information and/or clarification is needed. The enclosure to this letter contains the information needed for the staff to complete its review of your response to GL 95-03.

Please provide your response within 30 days from receipt of this letter. This request is within the original reporting burden for information collection of 350 hours covered by the Office of Management and Budget clearance number 3150-0011, which expires July 31, 1997.

Sincerely,

Original signed by:  
Mel B. Fields, Project Manager  
Project Directorate IV-2  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Docket Nos. 50-361  
and 50-362

Enclosure: Request for Additional  
Information

cc w/encl: See next page

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DOCUMENT NAME: GL-95-03.LTR

OFC	PDIV-2/LA	PDIV-2/PM
NAME	EPeyton	MFields:ye
DATE	10/23/95	10/27/95

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Mr. Harold B. Ray

- 2 -

cc w/encl:

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REQUEST FOR ADDITIONAL INFORMATION

CIRCUMFERENTIAL CRACKING OF STEAM GENERATOR TUBES (GL 95-03)

SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3

DOCKET NOS. 50-361 AND 50-362

1. The following areas have been identified as being susceptible to circumferential cracking:
  - a. Expansion transition circumferential cracking
  - b. Small radius U-bend circumferential cracking
  - c. Dented location (including dented TSP) circumferential cracking
  - d. Sleeve joint circumferential cracking

In your response, areas b and c were not specifically addressed for both units although it was indicated that the next steam generator tube inspections will be performed in accordance with the recommendations of the Electric Power Research Institute steam generator inspection guidelines. In addition, future inspection plans for area a were not provided for Unit 2. Please submit the information requested in Generic Letter (GL) 95-03 per the guidance contained in the GL for these areas (and any other area susceptible to circumferential cracking). The staff realizes that some of the above areas may not have been addressed since they may not be applicable to your plant; however, the staff requests that you clarify this (e.g., no sleeves are installed; therefore, the plant is not susceptible to sleeve joint circumferential cracking).

The above response should clarify the inspections performed at these locations during the prior tube inspection outage and should clarify the inspections to be performed in the upcoming tube inspection outages. For dented locations, if applicable, the criteria for determining which dents are/were examined should be provided. If a dent voltage threshold is used for such a determination, the calibration procedure used (i.e., 4.0 volts on 4-20% through-wall ASME holes at 550/130 mix) should be provided.

2. During the Maine Yankee outage in July/August 1994, several weaknesses were identified in their eddy current program as detailed in NRC Information Notice 94-88, "Inservice Inspection Deficiencies Result in Severely Degraded Steam Generator Tubes." In Information Notice 94-88, the staff observed that several circumferential indications could be traced back to earlier inspections when the data was reanalyzed using terrain plots. These terrain plots had not been generated as part of the original field analysis for these tubes. For the rotating pancake coil (RPC) examinations performed at your plant at locations susceptible to circumferential cracking during the previous inspection (i.e., previous inspection per your Generic Letter 95-03 response), discuss the extent to which terrain plots were used to analyze the eddy current data. If terrain plots were not routinely used at locations susceptible to circumferential cracking, discuss whether or not the RPC eddy current data has been reanalyzed using terrain mapping of the data. If terrain

plots were not routinely used during the outage and your data has not been reanalyzed with terrain mapping of the data, discuss your basis for not reanalyzing your previous RPC data in light of the findings at Maine Yankee.

Discuss whether terrain plots will be used to analyze the RPC eddy current data at locations susceptible to circumferential cracking during your next steam generator tube inspection (i.e., the next inspection per your Generic Letter 95-03 response).