



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

September 30, 2015

Mr. Edward D. Halpin  
Senior Vice President and  
Chief Nuclear Officer  
Pacific Gas and Electric Company  
Diablo Canyon Power Plant  
P.O. Box 56, Mail Code 104/6  
Avila Beach, CA 93424

SUBJECT: DIABLO CANYON POWER PLANT, UNIT NO. 2 - REVIEW OF THE STEAM  
GENERATOR TUBE INSERVICE INSPECTIONS FOR CYCLE 18  
REFUELING OUTAGE IN 2014 (TAC NO. MF6164)

Dear Mr. Halpin:

By letter dated April 29, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15119A457), Pacific Gas and Electric Company (PG&E, the licensee) submitted information summarizing the results of the fall 2014 steam generator tube inspections performed at Diablo Canyon Power Plant (DCPP), Unit No. 2. These inspections were performed during Refueling Outage 18.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information that PG&E provided and concludes that PG&E provided the information required by the DCPP, Unit No. 2 Technical Specifications and that no additional follow-up is required at this time. The NRC staff's review of the steam generator portions of the report is enclosed.

If you have any questions regarding this issue, please contact me at (301) 415-1564.

Sincerely,

A handwritten signature in cursive script that reads "Siva P. Lingam".

Siva P. Lingam, Project Manager  
Plant Licensing Branch IV-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-323

Enclosure:  
As stated

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OFFICE OF NUCLEAR REACTOR REGULATION

REVIEW OF STEAM GENERATOR TUBE INSPECTION REPORT FOR CYCLE 18

PACIFIC GAS AND ELECTRIC COMPANY

DIABLO CANYON POWER PLANT, UNIT NO. 2

DOCKET NO. 50-323

By letter dated April 29, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15119A457), Pacific Gas and Electric Company (PG&E, the licensee) submitted information summarizing the results of the fall 2014 steam generator (SG) tube inspections performed at Diablo Canyon Power Plant (DCPP), Unit No. 2. These inspections were performed during refueling outage (RFO) 18.

DCPP, Unit No. 2 has four Westinghouse Model D54 SGs, each of which contains 4,444 thermally-treated Alloy 690 tubes. Each tube has a nominal outside diameter of 0.750 inches. During SG fabrication, the tubes were hydraulically expanded over the full depth of the tubesheet. The ends of each tube are tack-expanded using a urethane plug expansion process. The tubes are arranged on a triangular pitch with 1.144-inch spacing. The tubes in rows 1 through 16 were full-length stress-relieved following bending. Eight Type 405 stainless steel support plates, which have broached trefoil-shaped holes, support the vertical section of the tubes. In the U-bend section, there are three sets of "V" shaped, rectangular stainless steel Type 405 anti-vibration bars.

The licensee provided the scope, extent, methods, and results of its SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions (e.g., tube plugging) taken in response to the inspection findings.

After reviewing the information provided by the licensee, the U.S. Nuclear Regulatory Commission (NRC) staff has the following comments or observations:

- Four new proximity indications were reported by bobbin in RFO 18 that had not been reported in RFO 15. All of the new proximity indications are in SG 23. Three locations were traced to RFO 15 bobbin data and preservice inspection data. One location was not traceable to RFO 15. No degradation was detected for the 16 (12 existing, four new) proximity indication locations.

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by the DCPP, Unit No. 2 Technical Specifications. In addition, the NRC staff concludes that there are no technical issues that warrant follow-up action at this time since the inspections appear to be consistent with the objective of detecting potential tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

Enclosure

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Siva P. Lingam, Project Manager  
Plant Licensing Branch IV-1  
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