



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

April 17, 2009

Vice President, Operations  
Entergy Operations, Inc.  
Waterford Steam Electric Station, Unit 3  
17265 River Road  
Killona, LA 70057-3093

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - REQUEST FOR  
ADDITIONAL INFORMATION RE: THE 2007 AND 2008 (REFUELING  
OUTAGE 15) STEAM GENERATOR TUBE INSPECTIONS (TAC NO. ME0164)

Dear Sir or Madam:

By letters dated May 20 and November 25, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML081440106 and ML083330083, respectively), Entergy Operations, Inc. (the licensee), submitted information pertaining to the 2007 mid-cycle and 2008 refueling outage 15 steam generator tube inspections at the Waterford Steam Electric Station, Unit 3. In addition to these reports, the U.S. Nuclear Regulatory Commission (NRC) staff summarized information concerning these inspections in letters dated November 23, 2007, and February 20 and October 28, 2008 (ADAMS Accession Nos. ML073190171, ML080510251, and ML081780404, respectively).

The NRC staff has reviewed the information provided in the Entergy submittals and determined that additional information is needed to complete its. The NRC staff discussed the requested information with Mr. R. Murillo and others of your staff on April 16, 2009. Mr. Murillo agreed to provide a response within 45 days of the receipt of this letter.

If you have any questions, please contact me at (301) 415-1480 or by electronic mail at [kaly.kalyanam@nrc.gov](mailto:kaly.kalyanam@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "N. Kalyanam", with a horizontal line underneath.

N. Kalyanam, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure:  
As stated

cc w/encl: Distribution via Listserv

OFFICE OF NUCLEAR REACTOR REGULATION  
REQUEST FOR ADDITIONAL INFORMATION  
WATERFORD STEAM ELECTRIC STATION, UNIT 3  
STEAM GENERATOR INSPECTION REPORTS  
FOR THE 2008 REFUELING OUTAGE  
DOCKET NUMBER 50-382

By letters dated May 20 and November 25, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML081440106 and ML083330083, respectively), Entergy Operations, Inc. (the licensee), submitted information pertaining to the 2007 mid-cycle and 2008 refueling outage (RFO) 15 steam generator (SG) tube inspections at the Waterford Steam Electric Station, Unit 3. In addition to these reports, the U.S. Nuclear Regulatory Commission (NRC) staff summarized information concerning these inspections in letters dated November 23, 2007, and February 20 and October 28, 2008 (ADAMS Accession Nos. ML073190171, ML080510251, and ML081780404, respectively).

The NRC staff has reviewed the licensee's information and determined that the following additional information is needed to complete the review:

1. The information in Table E-1 is not legible. Please provide another copy of Table E-1.
2. In Table E-1, SG-31 appears to have 8474 tubes in service prior to RFO 15 and 1176 tubes that were previously removed from service. These numbers do not agree with the total number of SG tubes (i.e., 9350 tubes). Please clarify the actual number of tubes in service and removed from service.
3. In Table F-1, the total number of plugs listed for SG-32 is 1217; however, the numbers associated with the separate outages from the column "SG32 Plugs" sum to 1218, not 1217. The asterisk associated with the number 460 (for 2006) was not shown in your outage summary report for RFO 14 (fall 2006). Please verify the number of tubes plugged in SG-32. Also, please discuss the tube that appears to be plugged in just one end (i.e., the tube referenced by the asterisk).
4. In Section G of your November 25, 2008, letter, you discuss condition monitoring, but the discussion on structural integrity limits only references the three times the normal operating differential pressure criterion. Please confirm that this criterion is the most limiting of the structural integrity performance criteria. If this is not the most limiting criterion, please discuss the extent to which the tubes satisfied all the structural integrity performance criteria.
5. Please confirm that no crack-like indications were found in the U-bend region of Rows 1 and 2 and that no crack-like indications were found during your dent and ding examinations. If indications were identified, please discuss the nature of the indications and the size of the dent/ding (if applicable) and the basis for not expanding the inspection.

Enclosure

6. Other than the free span indication in SG-31 in row 109, column 99, please discuss (and identify) whether any other free span indications (other than those near the top of the tubesheet) were detected.
7. During a conference call in May 2008, preliminary results indicated that one tube had a 42 percent through wall (TW) wear indication. Please identify this tube and confirm it was plugged. Also, please confirm that all other wear indications greater than or equal to 40 percent TW were plugged.
8. Please discuss whether any crack-like indications were found at or near locations with wear indications (e.g., at the same eggcrate location).

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Sincerely,

/RA/

N. Kalyanam, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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AJohnson, DCI/CSGB

**ADAMS Accession No. ML091030612**

\*No major change from Staff provided RAI

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