



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

August 22, 2012

Mr. Joseph E. Pacher  
Vice President  
R.E. Ginna Nuclear Power Plant  
R.E. Ginna Nuclear Power Plant, LLC  
1503 Lake Road  
Ontario, NY 14519

Dear Mr. Pacher:

SUBJECT: R.E. GINNA NUCLEAR POWER PLANT - RE: SUMMARY OF THE STAFF'S  
REVIEW OF THE 2011 STEAM GENERATOR TUBE INSERVICE  
INSPECTIONS (TAC NO. ME7597)

By letters dated November 15, 2011, and February 15, 2012, (Agencywide Documents Access and Management Systems Accession Numbers ML11325A118 and ML12053A147), Constellation Energy, the licensee for R. E. Ginna Nuclear Power Plant, submitted information summarizing the results of the 2011 steam generator tube inspections performed at R.E. Ginna Nuclear Power Plant.

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its evaluation of the steam generator tube inspection summary report and concludes that the licensee provided the information required by the R.E. Ginna Technical Specifications and no additional follow-up is required at this time. The results of the NRC staff's review of the report submitted by the licensee are summarized in the enclosed NRC staff's evaluation.

If you have any questions, please contact me at 301-415-1476 or via e-mail at [Mohan.Thadani@nrc.gov](mailto:Mohan.Thadani@nrc.gov).

Sincerely,

A handwritten signature in black ink, reading "Mohan C. Thadani", is positioned above the typed name and title.

Mohan C. Thadani, Senior Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-244

Enclosures: Staff Evaluation

cc w/encl: Distribution via Listserv



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OFFICE OF NUCLEAR REACTOR REGULATION

SUMMARY OF THE STAFF'S EVALUATION OF 2011 STEAM GENERATOR TUBE

INSERVICE INSPECTION REPORT CONSTELLATION ENERGY

R.E. GINNA NUCLEAR POWER PLANT

DOCKET NO. 50-244

By letters dated November 15, 2011, and February 15, 2012, (Agencywide Documents Access and Management Systems Accession Numbers ML11325A118 and ML12053A147), Constellation Energy, the licensee for R.E. Ginna Nuclear Power Plant (Ginna) submitted information to U. S. Nuclear Regulatory Commission (NRC) staff, summarizing the results of the 2011 steam generator (SG) tube inspections performed at Ginna .

Ginna has two SGs designed and fabricated by Babcock and Wilcox International. Each SG contains 4765 thermally treated Alloy 690 tubes. Each tube has a nominal outside diameter of 0.75 inch and a nominal wall thickness of 0.043 inch. The tubes were hydraulically expanded at both ends for the full length of the tubesheet and are supported by a number of type 410 stainless steel lattice grid supports.

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

Based on its review of the reports submitted, the NRC staff has the following observations and comments:

- The Ginna divider plate material is fabricated from SB-168 N06690 (Alloy 690) material and the weld material used to weld the divider plate to the seat bar is Incoloy 152, which is Alloy 690 compatible weld material. The seat bar, which is manufactured by weld buildup, is made of Incoloy 82 (I-82) material. The I-82 weld overlay on the tubesheet, on which the weld buildup is deposited, has been subjected to a postweld heat treatment process. A visual inspection of the divider plate weld area did not reveal any degradation. The visual acuity was a VT-1 examination. Fine machining marks were detectable along the divider plate surfaces indicating good examination detectability and resolution.
- One tube has a restriction in the U-bend area. The restricted tube is in row 9, column 121, and the restriction was determined to have been caused by a manufacturing dent (i.e., it is not service induced). The full length of this tube was inspected.

Enclosure

- Flow accelerated corrosion was visually detected in 3 of 85 secondary steam separators. The extent of erosion is still within manufacturing and design tolerances.
- There are approximately 240 dents near the top of the tubesheet in the Ginna SGs. These dents were observed in previous tube inspections and were discussed in previous NRC staff's evaluations. The vast majority of these dents is in steam generator B and as located on the cold-leg side of the SG. The dents are primarily located below the secondary face of the tubesheet in the small crevice where the tube is not expanded into the tubesheet. The voltage magnitude of the dents range from 2 to 40.5 volts, and the circumferential extent ranges from less than 45 degrees to 360 degrees.
- Approximately 20 to 25 loose parts were left in each SG. Most of the parts were flexitallic gasket pieces. An engineering evaluation was performed by the licensee to justify leaving the loose parts in service. No tube wear was expected to be associated with these loose parts.
- Thirteen tubes in steam generator A and twelve tubes in steam generator B are in close proximity of each other (proximity tubes). There is no tube-to-tube wear observed as a result of these tubes being in close proximity of each other. All of these "proximity tubes" are traceable to the first in-service inspection. There has been no change in the affected tube proximity locations or extent of proximity since the original detection of these indications.

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

Principal Contributor: C. Hunt

Dated: August 22, 2012

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Vice President  
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Sincerely,  
*/ra/*  
Mohan Thadani, Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-244

Enclosures: Staff Evaluation

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