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Docket Nos.: 50-424

NL-12-1561

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

Vogtle Electric Generating Plant – Unit 1  
Response to Request for Additional Information Regarding the 2011 Steam  
Generator Tube Inspection Summary

Ladies and Gentlemen:

By letters dated June 30, 2011 (Agencywide Documents Access and Management System (ADAMS), Accession Number ML111820361) and September 21, 2011 (ADAMS Accession No. ML112650199), Southern Nuclear Operating Company (SNC) submitted information summarizing the results of the 2011 steam generator tube inspection performed at Vogtle Electric Generating Plant (VEGP), Unit 1 during refueling outage 16. On July 5, 2012, the Nuclear Regulatory Commission (NRC) provided SNC with a Request for Additional Information (RAI) letter (ADAMS Accession No. ML12185A095), which contained 3 questions regarding the Vogtle 1R16 Steam Generator Inspection Report. Enclosure 1 contains the SNC response to the NRC questions from the July 5, 2012 letter.

This letter contains no NRC commitments. If you have any questions, please contact Lesa Hill at (205) 992-5727.

Respectfully submitted,

A handwritten signature in black ink that reads "Mark J. Ajluni". The signature is written in a cursive style.

M. J. Ajluni  
Nuclear Licensing Director

MJA/RMJ/lac

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cc: Southern Nuclear Operating Company

Mr. S. E. Kuczynski, Chairman, President & CEO

Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer

Mr. T. E. Tynan, Vice President – Vogtle

Mr. B. L. Ivey, Vice President – Regulatory Affairs

Mr. B. J. Adams, Vice President – Fleet Operations

RType: CVC7000

U. S. Nuclear Regulatory Commission

Mr. V. M. McCree, Regional Administrator

Mr. P. G. Boyle, NRR Senior Project Manager – Vogtle

Mr. L. M. Cain, Senior Resident Inspector – Vogtle

**Vogtle Electric Generating Plant – Unit 1**

**Enclosure**

**Response to Request to Additional Information Regarding the 2011 Steam  
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**NRC Question 1**

***Please discuss the scope and results of your secondary side inspections, if any. Was there any evidence of change in the region of SG 4 affected by the tube pulling operation?***

**SNC Response**

Secondary side maintenance and inspection activities performed during Vogtle Unit 1 refueling outage 16 in Spring 2011 included top of tubesheet (TTS) sludge lance and foreign object search and retrieval (FOSAR) of all four steam generators. FOSAR inspections included the following regions:

- Annulus and tubelane region including periphery tubes
- Historical foreign objects identified in previous inspections
- Possible loose parts (PLPs) from eddy current tube inspections

Sludge lancing removed a total of 23.5 pounds of material from all four steam generators.

After FOSAR, 44 objects remained in the steam generators. Seven of these remaining objects were metallic and 37 objects were sludge rocks. All the metallic objects remaining in the steam generators were classified as Category 3 and are not expected to cause significant tube wear over long term operation. This classification is taken from EPRI Report Number 1019039, "Steam Generator Management Program: Foreign Object Prioritization Strategy for Square Pitch Steam Generators," May 2009.

There was no evidence of change in the region of SG 4 affected by the tube pulling operation based on the eddy current bobbin probe data.

**NRC Question 2**

***On page E-2 wear due to foreign objects was observed in all SGs. However, in Table 1, there does not appear to be any wear attributed to foreign objects on SG 2. Please clarify.***

**SNC Response**

Page E-2 incorrectly states wear attributed to foreign objects was found in all SGs. Mechanical wear due to foreign objects was discovered during 1R16 for SGs 1, 3, and 4. No wear attributable to foreign objects was identified in SG 2 during 1R16.

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**NRC Question 3:**

***Please discuss whether any foreign objects/loose parts remain in the SGs. If so, discuss whether an analysis was performed to assess their affect on tube integrity until the next inspection. Were any foreign objects/loose parts left near active tubes with wear indications attributed to those loose parts?***

**SNC Response:**

After FOSAR, 44 objects remained in the steam generators. Seven of these remaining objects were metallic and 37 objects were sludge rocks. An engineering evaluation of these objects shows the limiting objects have a wear time greater than three effective full power years (EFPY) or two operational cycles without exceeding steam generator performance criteria. There were no new wear indications identified during 1R16 at the TTS in any tube adjacent to these foreign objects.