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SOUTHERN COMPANY
Energy to Serve Your World℠

June 22, 2006

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NL-06-1315

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

Vogtle Electric Generating Plant
Results of Reactor Pressure Vessel Head Inspections
Required by First Revised Order EA-03-009

Ladies and Gentlemen:

On April 21, 2006, Southern Nuclear Operating Company (SNC) completed a visual inspection of the Vogtle Electric Generating Plant Unit 1 (VEGP-1) Reactor Pressure Vessel Top Head (RPVH) inside the integrated head package. SNC hereby reports the results of this inspection as required by Paragraph E of Section IV of NRC First Revised Order EA-03-009.

Results:

Boric acid residue was observed on one of the four conoseal assemblies, penetration 76. The conoseals are mechanical joints on the four RPVH penetration extensions that form the pressure boundary for the incore thermocouples.

On April 19, 2006, SNC performed a visual inspection of the RPVH in the area of penetration 76 while in Mode 5. Insulation was removed from two areas and visual examinations performed as follows:

1. Inside the 90 degree shield door, two small vertical insulation panels were removed. With these panels removed, visual examinations were performed on the surface of RPVH around penetration 52 and the uphill side of the insulation above penetration 76. No boron residue was observed in this location.

2. An exterior large insulation panel was removed which allowed access to the viewport at the base of Penetration 76. The visual examination performed revealed traces of white boron residue on the penetration tube and a small amount of white boron residue at the base of the penetration tube.

The exams performed on April 19, 2006 revealed no corrosion or evidence of degradation of the RPVH.

A visual examination was also performed on April 21, 2006, while in Mode 5. This examination was coordinated with decon activities. The insulation previously removed on April 19, 2006 was still removed. The following observations were made during the examination:

1. A sufficient quantity of borated water had leaked since the exam performed on April 19, 2006 to result in boron residue on the RPVH flange up to and touching the washers associated with numerous closure head studs. The quantity of stud washers in contact is indeterminate, since all exterior head insulation was not removed. The origins of this leakage was associated with activities involved in the corrective maintenance of penetration 76.

2. Boron residue was observed at the interface of the RPVH and the mirror insulation in the area below penetrations 76, 63, and 57. Traces of residue were also observed on tubes of penetrations 76, 63, and 57 which extended to the surface of the RPVH.

The exams performed on April 21, 2006 also revealed no corrosion or evidence of degradation of the RPVH.

The above mentioned residue was deconned to the extent practical. The base of the penetrations mentioned were not deconned due to access limitations. The areas on the RPVH flange were cleaned where insulation was removed. The remainder of the flange was not cleaned.

The leakage from the penetration 76 connections was corrected. The effects of leaving the remaining boron residue on the RPVH are negligible as documented in corrosion assessment number 1201-2006-001. Testing has been performed as documented in Revision 1 of the EPRI Boric Acid Corrosion Guidebook on dry boric acid and the corrosion rates are very low. Corrosion products (if present) will be easily removed during the 2006 fall maintenance/refueling outage 1R13 with minor deconning. If borated water did migrate to the closure studs, any minor corrosion products (if present) will also be easily removed as part of typical mechanical stud cleaning performed every outage. It should be noted that the flange and studs would have been limited to less than 2 days of exposure to wet borated water if the borated water did migrate.

The examinations performed were documented by a written report.

A bare metal visual examination of the VEGP-1 RPVH is scheduled for 2006 fall maintenance/refueling outage 1R13. This examination will document any as-found conditions. The RPVH will be accessible for decon activities while on the head stand.

VEGP-1 returned to full power operation on April 26, 2006.

Mr. D. E. Grissette states he is a Vice President of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

This letter contains no NRC commitments. If you have any questions, please advise.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

Don E. Grissette

Sworn to and subscribed before me this 22 *day of* June, *2006.*

Notary Public

My commission expires: 4-28-07

VALERIE A. O'BRIEN NOTARY PUBLIC ALABAMA STATE AT LARGE

DEG/DRG/daj

cc: Southern Nuclear Operating Company
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