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Docket Nos.: 50-348  
50-364

NL-04-1396

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

Joseph M. Farley Nuclear Plant, Units 1 and 2  
Application for License Renewal – Supplemental RAI Information

Ladies and Gentlemen:

In response to NRC Staff requests, this letter provides supplemental information for certain previously submitted Request for Additional Information (RAI) responses. Descriptions of the specific requests and the SNC responses are provided in the Enclosure.

Mr. L. M. Stinson 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.

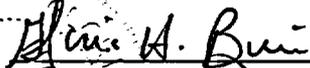
If you have any questions, please contact Charles Pierce at 205-992-7872.

Respectfully submitted,

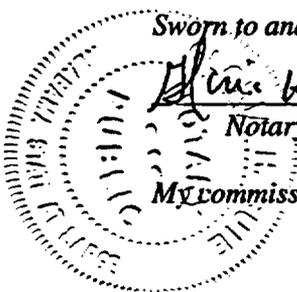
SOUTHERN NUCLEAR OPERATING COMPANY

  
L. M. Stinson

Sworn to and subscribed before me this 5<sup>th</sup> day of August, 2004.

  
Notary Public

My Commission expires: 6-7-05



LMS/JAM/slb

A099

Enclosure: Joseph M. Farley Nuclear Plant, Units 1 and 2  
Application for License Renewal – Supplemental RAI Information

cc: Southern Nuclear Operating Company  
Mr. J. B. Beasley Jr., Executive Vice President  
Mr. D. E. Grissette, General Manager – Plant Farley  
Document Services RTYPE: CFA04.054; LC# 14099

U. S. Nuclear Regulatory Commission  
Ms. T. Y. Liu, License Renewal Project Manager  
Dr. W. D. Travers, Regional Administrator  
Mr. S. E. Peters, NRR Project Manager – Farley  
Mr. C. A. Patterson, Senior Resident Inspector – Farley

Alabama Department of Public Health  
Dr. D. E. Williamson, State Health Officer

**ENCLOSURE**

**Joseph M. Farley Nuclear Plant, Units 1 and 2  
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**RAI B.5.9-1 - Follow-up Question**

The staff requests the applicant include a specific frequency for the periodic inspections. RAI B.5.9-1c states that a frequency will be determined when the program is developed.

**Response**

(Note: The SNC response to RAI B.5.9-1b indicated that the inspection frequency had not yet been determined and described how the inspection frequency would be determined.)

Aging management of the Condensate Storage, Reactor Make-up Water Storage and the Boric Acid tank diaphragms per the Periodic Surveillance and Preventive Maintenance Activities program will be implemented prior to the period of extended operation via an inspection of a sample set of diaphragms. The diaphragm(s) selected for this sample will be based on the age of each diaphragm (years in operation), the severity of the diaphragm environment, and the operating conditions (frequency and degree of the cycling of the tank's level). The initial inspections for the sample set will be performed prior to the period of extended operation.

The periodic inspection for the diaphragm sample set will initially be established on a ten (10) year frequency. Scheduling will be performed in accordance with existing site procedures. This frequency of inspection is subject to modification based on considerations such as observed degradation and operating experience.

**RAI B.5.2-1 (Supplemental)**

The applicant stated the following for its response to RAI B.5.2-1:

All accessible flux thimble tubes are inspected using ECT at each scheduled inspection. Flux thimble tubes which have been previously capped, or which are obstructed, cannot be inspected. The flux thimble tubes are inspected over their full length from the seal table to the nose of the tube at the top of the core. SNC will continue to inspect all accessible flux thimble tubes at each scheduled inspection. See the response to RAI B.5.2-3 to address scheduling of these inspections.

It appears that the applicant is capping or repositioning all thimble tubes that it has inspected and determined that an unacceptable amount of wear has occurred in the tubes. However, the response to the RAI indicates that the applicant will continue to perform inspections of 100% of the thimble that are accessible for inspection over the entire length from the seal table to the top of the core. The staff requests clarification whether the applicant is proposing to assure the structural integrity for thimble tubes that are obstructed from Eddy Current Testing (ECT) examinations or restricted from ECT examinations? In other words, is the applicant capping them and removing them from service or taking some other form of corrective action?

The staff has a copy of an inspection evaluation from Westinghouse to SNC giving the results and evaluation of the ECT examinations on the Farley Unit 2 thimble tubes performed during Unit 2 refueling outage 15. It indicates that thimble tubes C12 and L05 were obstructed from ECT examinations and thimble tubes J07, J15, L11, N08, and R08 were restricted from the ECT examinations along certain portions of the inspected length defined in the response to RAI B.5.2-1. The NRC's audit report, dated January 20, 1990, to Alabama Power Company, states one of the old thimble tubes at Farley Unit 1 as capped because it was blocked and could not be inspected. The staff seeks clarification as to what corrective actions are being taken to ensure the structural integrity of thimbles tubes that are totally obstructed or partially restricted to the ECT examinations.

**Response**

FNP has a program in place to assure the structural integrity of the Unit 2 incore thimble tubes by the performance of eddy current testing during alternate cycle outages. Testing was conducted most recently during U2R15, prior to Cycle 16 operation, and the results of that testing were provided to SNC via Westinghouse letter ALA-03-7. The report notes that some thimbles were blocked, and that some thimbles were restricted. Blocked thimbles are those which are physically damaged to the extent that an incore detector can not fully traverse the entire length. During U2R15, there were three such thimbles, H13, L4, and C12. These three thimbles have been removed from service and are presently capped. The report notes that several other thimbles were restricted. This means that the plastic eddy current probe encountered resistance at some point in the thimble, and rather than risk damage to the probe, the decision was made not to force the probe any further. The partial test data taken during U2R15 combined with the testing performed during previous outages provided sufficient data to project wear through the end of Cycle 17. The test report concluded that other than the three thimbles noted as blocked, all of the other 47 thimbles had projected wear for Cycles 16

and 17 of well below the 80% acceptance criteria, and that no repositioning or capping was necessary prior to the end of Cycle 17.

During Cycle 16 operation, the 47 thimbles remaining in service were all successfully traversed during every flux map, and no problems were encountered with detector sticking. At the end of the cycle, during U2R16, six thimbles were repositioned as a conservative measure, even though the wear projections from previous testing had been determined to be acceptable. It should be further noted that all Unit 2 flux thimble tubes are planned for replacement within the next five to seven years.

The Flux Detector Thimble Inspection Program is a new program. Consistent with FNP's commitment in Alabama Power Company's letter to the NRC dated November 2, 1988, the Flux Detector Thimble Inspection Program will include a requirement that flux thimble tubes which cannot be inspected due to blockages will be preventively capped.