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SOUTHERN COMPANY

October 5, 2010

NL-10-1895

Docket Nos.: 50-321
50-366

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

Edwin I. Hatch Nuclear Plant
Information on 3D Monicore Core Monitoring Software

Ladies and Gentlemen:

In a telephone conversation on September 21, 2010, NRC personnel requested additional information concerning the core monitoring software and system in use at Edwin I. Hatch Nuclear Plant (HNP). This information was related to a Technical Specification (TS) request made in letter NL-09-1380 dated December 17, 2009. In that letter, SNC proposed to revise the TS requirements regarding Reactivity Anomalies to wording similar to the BWR 6 Standard TS for Reactivity Anomalies. The NRC staff requested additional information to demonstrate that HNP is utilizing core monitoring products compatible with BWR 6 TS requirements. The following information is in response to that request:

> Plant Hatch utilizes the Global Nuclear Fuel (GNF) 3D MONICORE (Ref. 1) core monitoring software system. The latest version of this product incorporates the PANACEA Version 11 (PANAC11 – Ref. 2) core simulator code to calculate parameters such as core nodal powers, fuel thermal limits, etc., using actual, measured plant input data. PANAC11 is the same 3D core simulator code used in core design and licensing activities. When a 3D MONICORE core monitoring case is run, the core k-effective (as computed by PANAC11) is also calculated and printed directly on each 3D MONICORE case output. This value can then be directly compared to the predicted value of core k-effective as a measure of reactivity anomaly.
>
> The 3D MONICORE system is in widespread use throughout the GNF-fueled fleet of BWRs, including BWR/4 and BWR/6 plants. Use of a current version of 3D MONICORE therefore provides a BWR/4 plant the capability to perform the reactivity anomaly surveillance with the BWR/6 standard Technical Specification method using the calculated value of core k-effective which is directly comparable to the predicted value.

This letter contains no NRC commitments. If you have any questions, please contact Jack Stringfellow at (205) 992-7037.

Mr. M. J. Ajluni states he is Nuclear Licensing Director 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.

Respectfully submitted,

Mark J Ajluni

M. J. Ajluni
Nuclear Licensing Director

Sworn to and subscribed before me this 5th *day of* October, *2010.*

Laura Crumpt
Notary Public

My commission expires: 11-2-2013

MJA/PAH/lac

References:

(1) MFN-003-99, F. Akstulewicz (NRC) to G. Watford (GE), Safety Evaluation Report for GE Licensing Topical Report NEDC-32694P, "Power Distribution Uncertainties for Safety Limit MCPR Evaluations" (TAC No. M99069), Mar. 11, 1999 [provides NRC acceptance of 3D MONICORE core surveillance system power distribution uncertainties]

(2) MFN-035-99, S. Richards (NRC) to G. Watford (GE), Amendment 26 to GE Licensing Topical Report NEDE-24011-P-A, "GESTAR II" - Implementing Improved GE Steady State Methods (TAC No. MA6481), Nov. 10, 1999 [provides NRC acceptance of PANACEA Version 11]

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. D. R. Madison, Vice President – Hatch
Ms. P. M. Marino, Vice President – Engineering
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U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. R. E. Martin, NRR Project Manager – Hatch
Mr. E.D. Morris, Senior Resident Inspector – Hatch
Mr. P.G. Boyle, NRR Project Manager