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March 8, 2004

Docket Nos.: 50-424
50-425

NL-04-0363

Annette L. Vietti-Cook
Secretary of the Commission
U. S. Nuclear Regulatory Commission
ATTN: Rulemakings and Adjudications Staff
Washington, D. C. 20555-0001

Vogtle Electric Generating Plant
Answer to the First Revised NRC Order (EA-03-009)
Establishing Interim Inspection Requirements for
Reactor Pressure Vessel Heads at Pressurized Water Reactors

Dear Ms. Vietti-Cook:

In accordance with the requirements of 10 CFR 2.202(a)(2), Southern Nuclear Operating Company (SNC) provides herein its Answer to the February 20, 2004 Commission Issuance of First Revised NRC Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors, which will modify the licenses of the Vogtle Electric Generating Plant, Units 1 and 2. This Answer constitutes SNC's Response in accordance with Sections IV and V of the Revised Order, includes a request for relaxation of certain requirements of the Revised Order in accordance with Section IV.F., and is being transmitted to the Secretary of the Commission for filing pursuant to 10 CFR 50.4.

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

Sincerely,

A handwritten signature in black ink that reads "Jeffrey T. Gasser". The signature is written in a cursive style with a long horizontal line extending to the right.

Jeffrey T. Gasser

JTG/DRG

Enclosure: Answer to the Issuance of the First Revised NRC Order (EA-03-009)
Establishing Interim Inspection Requirements for Reactor Pressure Vessel
Heads at Pressurized Water Reactors

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A101
Rec'd 6/17/04
RUC 07/04

U. S. Nuclear Regulatory Commission

NL-04-0363

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cc: Southern Nuclear Operating Company
Mr. J. B. Beasley, Jr., Executive Vice President
Mr. W. F. Kitchens, General Manager – Plant Vogtle
Mr. M. Sheibani, Engineering Supervisor – Plant Vogtle
RType: CVC7000

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator (2 copies)
Mr. C. Gratton, NRR Project Manager – Plant Vogtle
Mr. J. Zeiler, Senior Resident Inspector – Plant Vogtle
Mr. James E. Dyer, Director, Office of Nuclear Reactor Regulation
Assistant General Counsel for Materials Litigation and Enforcement
Document Control Desk (3 copies)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)		
)		
Southern Nuclear Operating Company)	Docket Nos. 50-424	50-425
)	License Nos. NPF-68	NPF-81
Vogtle Electric Generating Plant)	EA-03-009	
)		

**LICENSEE'S ANSWER TO FEBRUARY 20, 2004 FIRST REVISED NRC ORDER
ESTABLISHING INTERIM INSPECTION REQUIREMENTS FOR
REACTOR PRESSURE VESSEL HEADS AT PRESSURIZED WATER REACTORS AT THE
VOGTLE ELECTRIC GENERATING PLANT**

On February 20, 2004, the Nuclear Regulatory Commission (“NRC” or “Commission”) issued an order in the captioned matter entitled First Revised Order Modifying Licenses (“Revised Order”) to Southern Nuclear Operating Company (SNC) in connection with the Vogtle Electric Generating Plant. The Revised Order supercedes the original NRC Order Modifying Licenses (Effective Immediately), dated February 11, 2003 (“Original Order”). The Original Order was issued as a result of the discovery of leaks and nozzle cracking at the Davis-Besse Nuclear Power Station and other pressurized water reactor (PWR) plants, after which the Commission determined that the performance of more effective inspections of the reactor pressure vessel (RPV) heads and associated penetrations are necessary. Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) , which is incorporated into NRC regulations by 10 CFR 50.55a, “Codes and Standards,” currently specifies that inspections of the RPV head need only include a visual examination of the insulated surface or surrounding area for signs of leakage. Based on recent experience, the Commission determined that such inspections are not sufficient to reliably detect circumferential cracking of RPV head nozzles and corrosion of the RPV head. Circumferential cracking of the RPV head nozzles and corrosion of the RPV head pose a safety concern because of the possibility of a nozzle ejection or loss-of-coolant accident if the conditions are not detected and repaired. Therefore, the NRC Original Order established interim requirements in Section IV to ensure that licensees implement and maintain appropriate measures to

inspect and, as necessary, repair RPV heads and associated penetrations. Since issuance of the Original Order, many requests for relaxation have been reviewed and granted by the NRC staff. Several common issues emerged from these requests prompting revision of certain inspection aspects of the Original Order. Consequently, the Revised Order includes revisions to Section IV addressing bare metal visual inspections, penetration nozzle inspection coverage, flexibility in combination of non-destructive examination methods, flaw evaluation, and requirements for plants which have replaced their RPV head.

The requirements of Section IV are to be effective and final 20 days from the date of the Revised Order, absent any request for a hearing or written approval of an extension of time in which to request a hearing. Accordingly, pursuant to 10 CFR 2.202(d), SNC consents to the Revised Order, subject to SNC's request for relaxation of the condition described below, as provided for by Section IV, paragraph F.

Request For Relaxation From Requirements IV.C.(5)(a)

Pursuant to Section IV.F of the Revised Order, SNC is required to seek relaxation of any conditions of the Revised Order with respect to any proposed deviations or alternatives to the inspection requirements with which SNC is unable to comply or as to which compliance is unnecessary. A request for relaxation regarding inspection of specific nozzles is required to address the following criteria:

- (1) The proposed alternative(s) for inspection of specific nozzles will provide an acceptable level of quality and safety, or
- (2) Compliance with this Order for specific nozzles would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

The Revised Order requires performance of RPV head and head penetration nozzle inspections by means of the techniques specified in Section IV, paragraph C. Relaxation is sought for the Vogtle Electric Generating Plant with regard to paragraph IV.C.(5)(a). Paragraph IV.C.(5)(a) requires bare metal visual examination of 100% of the RPV head surface (including 360° around each RPV head penetration

nozzle). For RPV heads with the surface obscured by support structure interferences which are located at RPV head elevations downslope from the outermost RPV head penetration, a bare metal visual inspection of no less than 95 percent of the RPV head surface may be performed provided that the examination shall include those areas of the RPV head upslope and downslope from the support structure interference to identify any evidence of boron or corrosive product. The support structure interference provision described in the Revised Order does not specifically include interferences due to the reflective metal insulation associated with the support structure. Therefore, SNC is unable to completely comply with this requirement due to inaccessibility of a small (< 5%) portion of the RPV head surface for inspection where the control rod drive mechanism (CRDM) shroud support structure and associated reflective metal insulation meet the RPV head.

Proposed Alternative:

SNC proposes to achieve substantial compliance with this requirement by conducting a bare metal visual examination of the RPV head surface to the extent accessible.

Discussion of Proposed Alternative and Consideration of Criteria:

It is SNC's position that compliance with the requirement for 100% visual examination coverage is unnecessary in that inaccessibility of a small percentage of the head surface due to the reflective metal insulation and shroud does not preclude performance of an effective bare metal visual examination of the RPV head. Improving access to this area for visual examination would require major disassembly of the reflective metal insulation and shroud causing a substantial increase in radiation dose. This increase in radiation dose would not be offset by an increase in quality or safety because:

- the RPV head penetration nozzles are not located in or adjacent to the inaccessible area so 360° visual examination around each RPV head penetration nozzle is unaffected by this limitation, and

- the head surface immediately upslope and downslope of the inaccessible area will be examined for evidence of boric acid leakage under the reflective metal insulation or shroud support structure.

Accordingly, the proposed alternative will provide an acceptable level of quality and safety.

In accordance with 10 CFR 2.202(a)(2) for an Answer to an Order, the following affirmation is required:

Mr. Jeffrey T. Gasser 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.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY


Jeffrey T. Gasser

Sworn to and subscribed before me this 8th day of March, 2004.


Notary Public

My commission expires: 11/10/06

