UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 6, 2009

Mr. Mark J. Ajluni
Manager, Nuclear Licensing
Southern Nuclear Operating Company, Inc.
40 Inverness Center Parkway
P.O. Box 1295
Birmingham, Alabama 35201

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2, REQUEST FOR ADDITIONAL INFORMATION REGARDING RELIEF REQUEST VEGP-ISI-ALT-02 FOR THE THIRD INSERVICE INSPECTION INTERVAL (TAC NOS. ME1097 AND ME1098)

Dear Mr. Ajluni:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated April 15, 2009, Southern Nuclear Operating Company, Inc., submitted relief request VEGP-ISI-ALT-02 which pertains to the implementation of a risk-informed/safety-based inservice inspection (ISI) program for Class 1 and 2 piping based on American Society of Mechanical Engineers, *Boiler and Pressure Vessel Code* Case N-716, applicable for the third ISI interval. The NRC staff has reviewed your application and finds that additional information is needed to complete its review.

The NRC staff's request for additional information is enclosed. Please provide a response within thirty (30) days of the date of this letter.

Sincerely,

Donna N. Wright, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosure:
RAI

cc w/ encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

REGARDING RELIEF REQUEST VEGP-ISI-ALT-02

VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

DOCKET NOS. 50-424 AND 50-425

By letter dated April 15, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091070075), Southern Nuclear Operating Company (the licensee), submitted to the U.S. Nuclear Regulatory Commission (NRC) staff, relief request (RR) VEGP-ISI-ALT-02, Version 1, to implement a risk-informed/safety based inservice inspection (ISI) program for Class 1 and 2 piping based on the American Society of Mechanical Engineers *Boiler and Pressure Vessel Code* (ASME Code) Case N-716 for Vogtle Electric Generating Plant (VEGP), Units 1 and 2. To complete its review, the NRC staff requests the following additional information.

Piping and NDE

1. Table IWB-2500-1 of ASME Code, Section XI, 2001 Edition with 2003 Addenda requires volumetric and/or surface examination of all Category B-F or B-J Pressure Retaining Dissimilar Metal Welds greater than nominal pipe size (NPS) 1. Based on recent findings of primary water stress corrosion cracking in Alloy 82/182 dissimilar metal welds the NRC staff would like more information on your inspection plans for these welds in the third Interval ISI Plan for VEGP.

   The submittal dated April 15, 2009, states that the plant augmented inspection program in response to MRP-139, Materials Reliability Program: *Primary System Piping Butt Weld Inspection and Evaluation Guideline* supplements the RIS-B program selection process. Describe the inspection plan of Alloy 82/182 dissimilar metal welds greater than NPS 1 in the third Interval ISI plan for VEGP (e.g., are these welds included in the number of welds selected for examination in the risk-informed inservice inspection (RI-ISI) program, how many of these welds are selected for examination, what examination method(s) are being employed, what is the frequency of examination, how is disposition of limited coverage (less than 90 percent) examinations handled, etc.).

2. On page E1-17, Section 3.3.4, "Program Relief Requests," the licensee provides guidance for program RRs. The licensee states the process outlined in Title 10 of the *Code of Federal Regulations,* 50.55a, will be used for RRs. Please discuss how incomplete examinations' (i.e. where coverage greater than 90 percent is not obtained) effect on risk will be assessed.

PRA

3. Please provide a description of significant issues identified by the independent external contractor's evaluation of Vogtle's probabilistic risk assessment (PRA) flooding model and describe how these issues have been addressed during the development of your RI-ISI program.

Enclosure

4. Attachment A (page A-3) states that the VEGP internal flooding PRA was re-performed in order to meet American Nuclear Society PRA standard Capability Category II (CCII). The NRC staff has concluded that additional work may be needed beyond CCII in order for the PRA technical adequacy to be consistent with that determined to be acceptable for PRAs that supported the Electric Power Research Institute TR-112657 RI-ISI process. Please explain how the following issues are addressed.

    a. The supporting requirement (SR), IF-C3 (IFSN-A8), in ASME PRA Standard RA-Sb-2005 identifies the failure mechanisms that shall be evaluated to determine the susceptibility of each safety-related structure, system, and component (SSC) in a flood area to flood-induced failures. CCII identifies failure by submergence and spray as requiring detailed analysis. Capability Category III includes jet impingement, pipe whip, and humidity, condensation, and temperature concerns. RI-ISI requires that all SSC failures induced by a pipe break be considered. Please demonstrate that all SSC failures that are induced by a pipe break are adequately addressed in your analysis (i.e., meets capability Category III for this SR).

    b. The SR, IF-C6 (IFSN-A14) and IF-C8 (IFSN-A16), permit screening out of flood areas based on, in part, the success of human actions to isolate and terminate the flood to meet CCII. The endorsed RI-ISI methods require determination of the flood scenario with and without human intervention which corresponds to the capability Category III (i.e., scenarios are not screened out based on human actions). Therefore, a capability Category III analysis is consistent with approved RI-ISI methods. To provide confidence that scenarios that might exceed the quantitative core damage frequency and large early release frequency guidelines are identified, please describe how credit is given to human actions and how the analysis meets capability Category III for these SRs.

    c. SR IF-D3a (IFEV-A3) Category II permits grouping or subsuming flood initiating scenarios with existing plant initiating event groups. Capability Category III does not permit grouping, which is more consistent with the approved RI-ISI methods. If grouping of flood scenarios with other initiating events groups was done, please confirm that the subsumed flooding scenarios were identified during the flooding analysis and extracted during the RI-ISI analysis in order to ensure that their contribution to the RI-ISI analysis was properly included (i.e., meets capability Category III for this SR).

5. Were new examination locations identified? If so, using an upper-bound estimate for new locations would overestimate the risk decrease and therefore be non-conservative. Please demonstrate that this non-conservative approach, if corrected in the evaluation of your proposed RI-ISI program, would not cause the delta risk guidelines to be exceeded.

August 6, 2009

Mr. Mark J. Ajluni
Manager, Nuclear Licensing
Southern Nuclear Operating Company, Inc.
40 Inverness Center Parkway
P.O. Box 1295
Birmingham, Alabama 35201

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2, REQUEST FOR ADDITIONAL INFORMATION REGARDING RELIEF REQUEST VEGP-ISI-ALT-02 FOR THE THIRD INSERVICE INSPECTION INTERVAL (TAC NOS. ME1097 AND ME1098)

Dear Mr. Ajluni:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated April 15, 2009, Southern Nuclear Operating Company, Inc., submitted relief request VEGP-ISI-ALT-02 which pertains to the implementation of a risk-informed/safety-based inservice inspection (ISI) program for Class 1 and 2 piping based on American Society of Mechanical Engineers, *Boiler and Pressure Vessel Code* Case N-716, applicable for the third ISI interval. The NRC staff has reviewed your application and finds that additional information is needed to complete its review.

The NRC staff's request for additional information is enclosed. Please provide a response within thirty (30) days of the date of this letter.

Sincerely,

/RA/

Donna N. Wright, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosure:
RAI

cc w/ encl: Distribution via Listserv

DISTRIBUTION:

Public	RidsOgcRp Resource	RidsRgn2MailCenter Resource
LPL2-1 R/F	RidsAcrsAcnw_MailCTR	RidsNrrPMVogtle Resource
RidsNrrDorlLpl2-1 Resource	RidsNrrDraApla Resource	KHoffman, NRR
RidsNrrLASRohrer Resource	RidsNrrDciCpnb Resource	JPatel, NRR

ADAMS Accession No.: ML092170206 NRR-088 *provided by memo dated

OFFICE	NRR/LPL2-1/PM	NRR/LPL2-1/LA	NRR/APLA/BC	NRR/CPNB/BC	NRR/LPL2-1/(A)BC
NAME	DWright	SRohrer	DHarrison	TChan	UShoop
DATE	08/5/09	08/5/09	07/16/09*	07/29/09*	08/6/09

OFFICIAL RECORD COPY