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

June 11, 2010

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

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT RELIEF REQUESTS VEGP-ISI-ALT-04 (UNITS 1 AND 2) AND VEGP-ISI-RR-01 (UNIT 2) INSERVICE INSPECTION ALTERNATIVES FOR THIRD AND SUBSEQUENT INSERVICE INSPECTION INTERVALS (TAC NOS. ME2226, ME2227, AND ME1134)

Dear Mr. Ajluni:

By letters dated April 23, September 9 and October 26, 2009, (references 1, 2 and 3 in the Enclosure), Southern Nuclear Operating Company, Inc. (SNC, the licensee), submitted a request for relief (RR) from certain requirements of the American Society of Mechanical Engineers (ASME) Code for the Vogtle Electric Generating Plant (VEGP), Unit 2. Specifically, RR VEGP-ISI-RR-01, Version 1.0, requests to take credit for the concrete containment tendon strand testing performed on Unit 1 to satisfy the requirements for strand testing on Unit 2.

Based on the review of the information the licensee provided, the staff concludes that compliance with the ASME Code requirements for VEGP, Unit 2, is impractical and that the licensee's proposed alternatives provide reasonable assurance that continued structural integrity of the Unit 2 post-tensioning system will be maintained. Therefore, the requested relief is authorized pursuant to 10 CFR 50.55a(a)(g)(6)(i) for the remainder of the third 10-year inservice inspection (ISI) interval for VEGP, Unit 2. Granting of relief pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(g)(6)(i), is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

Also, by letters dated September 9, and October 26, 2009, and February 25, 2010, (references 2, 3 and 4 in the Enclosure) SNC submitted related RR VEGP-ISI-ALT-04, through Version 3, to align the ISI schedule for containment inspections for VEGP Units 1 and 2. The NRC staff has reviewed RR VEGP-ISI-ALT-04, Version 3, and determined, as discussed in the enclosure, that aligning the IWL-2000 Examination and Inspections for the VEGP Unit 1 containment so that they may be performed concurrently with those for VEGP Unit 2, will provides an acceptable level of quality and safety. Therefore, relief is granted pursuant to 10 CFR 50.55a(a)(3)(i) for the remainder of the third inservice inspection interval and for subsequent ISI intervals at VEGP, provided the examination schedule in IWL-2400 for concrete and unbonded post-tensioning system, in the applicable Code of Record for these subsequent intervals, remain the same as that of the ASME Code of Record for the third ISI interval.

If you have any questions concerning this action, please contact Robert Martin of my staff at 301-415-1493.

Sincerely,

Gloria Kulesa, Branch Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosure:
Safety Evaluation

cc w/encl: Distribution via Listserv

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO RELIEF REQUEST VEGP-ISI-ALT-04 (UNITS 1 AND 2)

AND

VEGP-ISI-RR-01 (UNIT 2)

CONTAINMENT TESTING ALTERNATIVES

SOUTHERN NUCLEAR OPERATING COMPANY, INC.,

VOGTLE ELECTRIC GENERATING PLANT

DOCKET NOS. 50-424 AND 50-425

1.0 INTRODUCTION

By letters dated April 23, September 9 and October 26, 2009, (References 1, 2 and 3, respectively), Southern Nuclear Operating Company, Inc. (SNC, the licensee), submitted, for the Vogtle Electric Generating Plant (VEGP), relief request (RR) VEGP-ISI-RR-01, Version 1.0, as applicable to VEGP, Unit 2. SNC requested relief from the requirement of paragraph IWL-2523 of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, Subsection IWL, to perform testing of the VEGP Unit 2 containment tendon strands on the basis of impracticality, and instead, credit the strand testing performed on Unit 1 for Unit 2.

By letters dated September 9, and October 26, 2009, and February 25, 2010, (References 2, 3 and 4, respectively), SNC submitted for VEGP, Units 1 and 2, RR VEGP-ISI-ALT-04, through Version 3. RR VEGP-ISI-ALT-04 requested alignment of the Unit 1 and Unit 2 schedules for ASME Code Article IWL-2000 containment inservice inspections (ISI).

2.0 REGULATORY EVALUATION

10 CFR 50.55a(a)(3)(i) states that proposed alternatives to the requirements of paragraphs (c), (d), (e), (f), (g) and (h) of the section (i.e., 10 CFR 50.55a "Code and Standards") or portions thereof may be used when authorized by the Director of the Office of Nuclear Reactor Regulation, provided the applicant demonstrates that the proposed alternatives would provide an acceptable level of quality and safety. The licensee has submitted RR VEGP-ISI-ALT-04 pursuant to 10 CFR 50.55a(a)(3)(i).

10 CFR 50.55a(g)(5)(iii) states that if the licensee has determined that conformance with certain code requirements is impractical for its facility, the licensee shall notify the Commission and submit, as specified in 10 CFR 50.4, information to support the determinations. Pursuant to 10 CFR 50.55a(g)(6)(i), the Commission will evaluate determinations under paragraph (g)(5)

that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result in the requirements were imposed on the facility. The licensee has submitted RR VEGP-ISI-RR-01 pursuant to 10 CFR 50.55a(g)(5)(iii) which the Commission may grant pursuant to 10 CFR 50.55a(g)(6)(i).

3.0 TECHNICAL EVALUATION

3.1 Relief Request VEGP-ISI-ALT-04, Version 3.0 (References 2, 3 and 4).

3.1.1 ASME Code Components Affected:

Code Class:	Class CC Containment in VEGP, Units 1 and 2 (VEGP)
Code Reference:	ASME Code, Section XI, Subsection IWL, Table IWL-2500-1
Examination Category:	L-A, Concrete, and L-B, Unbonded Post-Tensioning System
Item Number:	L1.11, L1.12, L2.10, L2.20, L2.30, L2.40 and L2.50
Description:	Containment concrete surfaces and post-tensioning system

3.1.2 Applicable Code Edition and Addenda:

The applicable ASME Code of Record for the third containment ISI interval (May 31, 2007 through May 30, 2017) for VEGP Units 1 and 2, is the ASME Code, Section XI, 2001 Edition through the 2003 Addenda, Subsection IWL subject to the regulatory conditions in 10 CFR 50.55a(b)(2)(viii)(E) through (b)(2)(viii)(G), as applicable. The applicable ASME Code edition and addenda for the subsequent 120-month inspection intervals shall be in accordance with 10 CFR 50.55a(g)(4)(ii).

3.1.3 Applicable Code Requirement from which Relief is Requested:

The ISI schedule in IWL-2410(a), applicable only to concrete, states: "Concrete shall be examined in accordance with IWL-2510 at 1, 3, and 5 years following the completion of the containment Structural Integrity Test CC-6000 and every 5 years thereafter."

The ISI schedule in IWL-2421(b), applicable only to unbonded post-tensioning systems of containments at sites with multiple units, states:

"When the conditions of IWL-2421(a) are met, the inspection dates and examination requirements may be as follows:

(1) For the containment with the first Structural Integrity Test, all examinations required by IWL-2500 shall be performed at 1, 3, and 10 years and every 10 years thereafter. Only the examinations required by IWL-2524 and IWL-2525 need be performed at 5 and 15 years and every 10 years thereafter.

(2) For each subsequent containment constructed at the site, all examinations required by IWL-2500 shall be performed at 1, 5, and 15

years and every 10 years thereafter. Only the examinations required by IWL-2524 and IWL-2525 need be performed at 3 and 10 years and every 10 years thereafter."

Note from IWL-2420(a) that the Code schedule for performing examination of unbonded post-tensioning systems is also with reference to the date of completion of the containment Structural Integrity Test (SIT).

3.1.4 Licensee's Proposed Alternative and Duration:

In lieu of using the initial SIT date specified by IWL-2400 for determining the schedule of examinations required by Table IWL-2500-1 for concrete and unbonded post-tensioning systems of the VEGP (Unit 1 and Unit 2) containments, SNC proposes to establish a common "re-baselining date" of August 1, 2010 (± 1 year) to allow alignment of the schedule for all the Table IWL-2500-1 examinations (concrete and post-tensioning system) for Unit 1 and Unit 2, in the third ISI interval and subsequent ISI intervals. SNC provided the final "Proposed IWL Examination Schedule" for future IWL examinations, until the year 2030, for VEGP Units1 and 2 using the above common "re-baselining" date in Table 1 of reference 4.

The licensee stated that Table 1 of the RR indicates: (1) Subsection IWL, Table IWL-2500-1, Category L-A, Item L1.10 (which includes Items L1.11 and L1.12) will be performed on a 5-year frequency, (2) Subsection IWL, Table IWL-2500-1, Category L-B, Items L2.30, L2.40 and L2.50 will be performed on a 5-year frequency, and (3) Subsection IWL, Table IWL-2500-1, Category L-B, Item L2.10 and Item L2.20 (as modified by VEGP-ISI-RR-01 for VEGP Unit 2) will be performed on a 10-year frequency.

The relief is requested for the third ISI interval at VEGP Units 1 and 2, and all subsequent ISI intervals.

3.1.5 Licensee's Basis and Justification for the Relief:

The licensee has requested the relief pursuant to 10 CFR 50.55a(3)(i) on the basis that the proposed alternative provides an acceptable level of quality and safety. The licensee stated that the VEGP Units 1 and 2 containments utilize the same pre-stressing system, and are essentially identical in design (except Unit 2 tendons were not designed to allow detensioning) and are similarly exposed to the same environmental conditions. The post-tensioning operation for VEGP Unit 1 was completed on April 26, 1986, and for VEGP Unit 2 on December 31, 1986, and was, thus, completed less than two years apart. Therefore, the VEGP units meet the criteria of IWL-2421(a), for sites with multiple units, which would allow for scheduling examinations (of the unbonded post-tensioning systems) per IWL-2421(b).

The licensee stated that the last complete IWL-2500 examinations (for the unbonded post-tensioning systems in Table IWL-2500-1) were performed in 2000 for VEGP Unit 1 and in 2005 for VEGP Unit 2. Only the post-tensioning system examinations required by IWL-2524 and IWL-2525 were performed in 2000 for Unit 2 and 2005 for Unit 1. In the

supplemental information, provided in reference 4, SNC confirmed that the previous IWL required concrete examinations (i.e., examination required under Examination Category L-A in Table IWL-2500-1) have been performed every 5 years in accordance with the ASME Code requirements. The licensee also stated that the recent two concrete surface examinations at each of the two units were performed in 2000 and 2005 and the next examination is scheduled for 2010. From the schedule of the previous examinations performed since 2000, it is noted that the examination of Item L2.10 "Tendon" and Item L2.20 "Wire or Strand" in Table IWL-2500-1 in accordance with IWL-2522 and IWL-2523, respectively, were not previously aligned for the two units. Therefore, in this RR, SNC proposes an examination frequency equivalent to the requirement in the ASME Code, Section XI, Subsection IWL, on a slightly altered schedule by "re-baselining" the Table IWL-2500-1 examinations in 2010 such that all the IWL-2500 examinations (including those for Items L2.10 and L2.20) can be aligned and performed concurrently for both VEGP units. In Table 1 of the RR (reference 4), the licensee provided the proposed "re-baselined" examination schedule based on the next IWL-2500 examinations being performed concurrently for both units beginning August 1, 2010 (± 1year).

The licensee stated that the proposed "re-baselining" has no impact on the ASME Code required examination frequencies for either unit, but will allow VEGP to schedule the tendon and strand testing for both units during the same time period. The licensee added that being able to perform tendon and strand testing on both units during the same time period "decreases the cost for mobilization of contractor personnel, increases the efficiency of equipment and personnel resources, allows for more standardization and application of lessons learned between units but still provides an acceptable level of quality and safety for the containment structures."

The licensee stated that VEGP Units 1 and Unit 2 SITs were completed on August 23, 1986, and November 14, 1988, respectively. By letter dated September 12, 1989 (Reference 5.6), the NRC previously approved Technical Specification (TS) Amendment 23 and 4 for VEGP Units 1 and 2, respectively, that allowed the option of performing tendon lift-off testing of both units during the same time period. Also, a relief request, RR-L-2, similar to the current request was authorized in June 2000 (Reference 5.5) for the second ISI interval that allowed all tendon and concrete examinations to be aligned for the two units, but on a 5-year frequency, without taking credit for the relaxed schedule in IWL-2421(b) for post-tensioning system for sites with multiple units.

In its response dated September 9, 2009, to the NRC staff's RAI, the licensee stated that the tendon lift-off testing (Item L2.10) was last performed on VEGP Unit 2 in 2005, including one vertical tendon detensioned on VEGP Unit 1 for testing (Item L2.20), in accordance with RR-L-3. Liftoff testing (Item L2.10) on VEGP Unit 1 was last performed in 2000, including one horizontal and one vertical tendon detensioned on VEGP Unit 1 for testing (Item L2.20), in accordance with RR-L-3. Although approval was obtained to align lift-off testing for both units through RR-L-2 and TSs (Amendments 23 and 4), lift-off testing was not performed at the same time during the last interval.

Based on the tendon lift-off schedule requested in that RR, it was approved by the NRC in a previous Technical Specification Amendment in 1989 (i.e., Amendment 23 (Unit 1) and Amendment 4 (Unit 2) which were superseded by the TS amendment in 1996 that

incorporated the 1996 rule change in 10 CFR 50.55a, which required containment inservice examinations to be performed in accordance with ASME Code, Section XI, Subsections IWE and IWL), and the proposed examination frequency being consistent with that required by the ASME Code, Section XI - Subsection IWL, the licensee concluded that the proposed alternative provides an acceptable level of quality and safety.

3.1.6 Staff Evaluation:

The VEGP Units 1 and 2 containments are subject to inservice examination schedules in IWL-2410(a) for concrete and in IWL-2421(b) applicable to the unbonded post-tensioning systems for sites with multiple units. The 10-year and subsequent IWL examinations shall commence not more than one year prior to the specified dates and shall be completed not more than one year after such dates.

The licensee, in its RR, proposed to perform all of the next required IWL-2500 examinations in accordance with Table IWL-2500-1 (Examination Categories L-A 'Concrete' and L-B 'Unbonding Post-tensioning System') for both VEGP Units 1 and 2 by the common re-baselined date of August 1, 2010 (± 1 year allowed by IWL-2410(c), and IWL-2420(c)) and, thereafter, follow the schedule in IWL-2410(a) for concrete and in IWL-2421(b) for the unbonded post-tensioning system, except as modified by RR VEGP-ISI-RR-01 for IWL-2523 strand testing (Item L2.20) for VEGP Unit 2. The licensee's proposed schedule through 2030 is shown in Table 1 of the RR. The licensee's schedule, thus, proposes to align all Table IWL-2500-1 examinations and perform them concurrently during the same time period for both units, beginning on the "rebaselining" date of August 1, 2010 (± 1 year).

From the proposed rebaselined schedule in Table 1 of the RR, effective August 1, 2010 (± 1 year), for VEGP Units 1 and 2, the NRC staff finds that the Table IWL-2500-1, Examination Category L-A 'Concrete' examinations for Items L1.11 and L1.12 will be performed at a 5-year frequency, which remains consistent with the frequency required by IWL-2410(a) for concrete (including sites with multiple plants). Further, the NRC staff finds that Table IWL-2500-1 Examination Category L-B 'Unbonded Post-Tensioning System' examinations will be performed at a 10-year frequency for Items L2.10 and L2.20, and at a 5-year frequency for Items L2.30, L2.40 and L2.50, which are also consistent with the required frequency of examinations for each unit in IWL-2421(b), applicable only to unbonded post-tensioning systems for sites with multiple plants. Based on the information provided in the current RR, the licensee's responses to the NRC staff's RAIs in references 2 and 4, and previous RR-L-2 examinations performed on VEGP Units 1 and 2 during the second ISI interval at VEGP (May 1997 – May 2007) and the examination schedule proposed by this RR for the third and subsequent ISI intervals, a summary of the past and proposed IWL examination schedule for VEGP is provided in the following table.

Table IWL-2500-1 Examinations	**Cat. L-A 'Concrete' Item L1.10 (includes L1.11 & L1.12)**	**Cat. L-B 'Unbonded Post-tensioning System' Items L2.10 (tendon lift-off) & L2.20 (strand)**	**Cat. L-B 'Unbonded Post-tensioning System' Items L2.30 L2.40 & L2.50**
Examinations previously performed during VEGP second ISI interval (May 1997 – May 2007)			
Unit 1	8/2000, 2005	8/2000	8/2000, 2005
Unit 2	8/2000, 2005	2005 (with L2.20 on U1 vertical strand as modified by RR-L-3)	8/2000, 2005
Proposed Examination Schedule for VEGP third ISI interval (May 2007 – May 2017) and subsequent intervals (from Table 1 of RR)			
Unit 1	8/2010, 2015, 2020, 2025, 2030	8/2010, 2020, 2030	8/2010, 2015, 2020, 2025, 2030
Unit 2	8/2010, 2015, 2020, 2025, 2030	8/2010, 2020, 2030 (with L2.20 testing on U1 strands credited for U2 as modified by VEGP-RR-ISI-01)	8/2010, 2015, 2020, 2025, 2030

Although the licensee obtained NRC approval to align the lift-off testing for both units through RR-L-2 (on a 5-year frequency) and Technical Specifications (Amendments 23 and 4), all Table IWL-2500-1 examinations, except lift-off testing (L2.10) and L2.20 strand testing, as modified by RR-L-3, were already aligned for the two units during the previous (second) ISI interval. The NRC staff finds that the schedule followed for the second ISI interval, for the two units, was consistent with the schedule in IWL-2410(a) for concrete and in IWL-2421(b) for unbonded post-tensioning systems for sites with multiple units (as modified by RR-L-3), based on a baseline date of August 1, 2000.

Therefore, the NRC staff finds that the proposed "re-baselining" of the schedule in this RR has no impact on the Code-required examination frequencies for sites with multiple plants for either unit, but will also allow VEGP to schedule the tendon lift-off (Item L2.10) and strand testing (L2.20, as modified by RR VEGP-ISI-RR-01 for VEGP Unit 2) for both units during the same time period. The staff also finds that the proposed alternative examination will not extend any Table IWL-2500-1 required examinations beyond the time period allowed by the ASME Code.

Based on the above evaluation and the NRC staff's prior approval of the containment testing program in reference 6, the NRC staff finds that the licensee-proposed alternative in this RR will provide an acceptable level of quality and safety.

Therefore, the NRC staff authorizes the proposed alternative, pursuant to 10 CFR 50.55a(a)(3)(i), on the basis that the examinations will be completed within the limits of the Code and that it provides an acceptable level of quality and safety. RR VEGP-ISI-ALT-04, Version 3.0, is authorized for the third ISI interval (May 31, 2007 thru May 30, 2017) for VEGP Units 1 and 2. The relief is also authorized for subsequent ISI intervals at VEGP, provided the examination schedule in IWL-2400 for concrete and unbonded post-tensioning system in the applicable ASME Code of Record for these subsequent intervals remain the same as that in the ASME Code of Record for the third ISI interval, which is the 2001 Edition through the 2003 Addenda of the ASME Code, Section XI. The applicable ASME Code edition and Addenda for subsequent 120-month inspection intervals shall be in accordance with 10 CFR 50.55a(g)(4)(ii).

3.2 Relief Request VEGP-ISI-RR-01, Version 1.0 (References 1, 2, 3)

3.2.1 Component Identification:

Code Class:	Class CC Containment,
Code Reference:	ASME Code, Section XI, Subsection IWL, Table IWL-2500-1
Examination Category:	L-B, Unbonded Post-Tensioning System
Item Number:	L2.20, Wire or Strand
Description:	VEGP Unit 2 tendon strands

3.2.2 Applicable Code Edition and Addenda:

The applicable ASME Code of Record for the third ISI interval for VEGP Unit 2, is the ASME Code, Section XI, 2001 Edition through the 2003 Addenda, Subsection IWL (hereafter referred to as the ASME Code) subject to the regulatory conditions in 10 CFR50.55a(b)(2)(viii)(E) through (b)(2)(viii)(G), as applicable. The applicable ASME Code edition and Addenda for subsequent 120-month inspection intervals shall be in accordance with 10 CFR 50.55a(g)(4)(ii).

3.2.3 Applicable Code Requirement from which Relief is Requested:

IWL-2523 requires a tendon wire and strand sample to be removed, examined and tested during each tendon surveillance, as stated in the Code sub-paragraphs below.

IWL-2523.1, "Tendon Detensioning and Sample Removal" requires that:
One sample tendon of each type shall be completely detensioned. A single-wire or strand shall be removed from each detensioned tendon.

IWL-2523.2, "Sample Examination and Testing" requires that:

(a) Each removed wire or strand shall be examined over its entire length for

corrosion and mechanical damage. The examination shall determine the location of most severe corrosion, if any. Strand wires shall be examined for wedge slippage marks.

(b) Tension tests shall be performed on each removed wire or strand: one at each end, one at mid-length, and one in the location of the most corroded area, if any. The following information shall be obtained from each test: (1) yield strength, (2) ultimate tensile strength, and (3) elongation.

3.2.4 Licensee's Basis and Justification for Request:

Pursuant to 10 CFR 50.55a(g)(5)(iii) and 10 CFR 50.55a(g)6)(i), the licensee has requested relief on the basis that conformance with the ASME Code requirements is impractical since the current VEGP Unit 2 containment configuration does not provide for compliance with the AME Code requirements and the post-tensioning configuration cannot be modified to allow for compliance.

The licensee stated that the VEGP Unit 2 post-tensioning system was designed so that no tendons can be detensioned without creating voids in the sheathing filler material. Without the capability to completely detension a tendon, strand samples cannot be removed and tested. VEGP was originally licensed so that tendon lift-off and strand testing would be performed on VEGP Unit 1 only. Only the VEGP Unit 1 containment structure is equipped with the provision for tendon removal with detensionable anchorage assemblies as stated in the VEGP Updated Final Analysis Report, Section 3.8.1.7.2. The VEGP Unit 2 containment has permanent anchorage assemblies which are non-detensionable.

Therefore, the licensee concluded that relief from the ASME Code requirements should be granted under 10 CFR 50.55a(g)(6)(i) based on impracticality. The VEGP Unit 2 containment post-tensioning system cannot be modified to allow for compliance with the Code requirements. The proposed alternative, which is based on testing that was approved by the NRC for the second ISI interval, ensures that the structural integrity of the containment is being maintained.

3.2.5 Burden Caused by Compliance:

The licensee stated that the current VEGP Unit 2 containment configuration does not provide for compliance with the ASME Code requirements and the post tensioning configuration cannot be modified to allow for compliance.

3.2.6 Proposed Alternative Examination and Duration:

The licensee stated that:

(1) VEGP will continue to perform lift-off testing on the VEGP Unit 2 tendons in accordance with IWL-2520.

(2) The strand selected for each tendon type during lift-off testing of VEGP Unit 1 (performed during the same time frame as the VEGP Unit 2 lift-off testing) will be credited for VEGP Unit 2.

The licensee stated that VEGP Units 1 and 2 containments utilize the same pre-stressing system, are essentially identical in design (except Unit 2 tendons were not designed to allow detensioning) and are similarly exposed to the same environmental conditions. The post-tensioning operations for VEGP Unit1 were completed on April 26, 1986, and for VEGP Unit 2 on December 31, 1986, and were thus completed less than two years apart. Therefore, the VEGP units meet the criteria of IWL-2421(a), for sites with multiple units that would allow for the alternate schedule of examinations (of the unbonded post-tensioning systems) per IWL-2421(b).

The licensee stated that a full test schedule of IWL examinations beginning on August 1, 2010 is outlined in Table 1 of reference 4, which is also being authorized in this SE. This schedule, when authorized, would allow all Table IWL-2500-1 examinations (including Item L2.10 "Tendon" and Item L2.20 (for Unit 1 only) "Wire or Strand") to be aligned and performed concurrently for both units. Thus, the strand testing that will be performed for VEGP Unit 1 and also credited for VEGP Unit 2 will be performed during the same time frame as the VEGP Unit 2 lift-off testing. Therefore, the licensee concluded that the performance of IWL-2520 examinations on the VEGP Unit 2 post-tensioning system (except the strands), while crediting the VEGP Unit 1 strand testing (performed during the same time frame) for VEGP Unit 2 provides reasonable assurance of structural integrity of the VEGP Unit 2 unbonded post tensioning system.

The licensee stated as a precedent, that an equivalent RR, RR-L-3, was previously granted for the first containment ISI interval (second ISI interval) at VEGP by NRC SE dated June 16, 2000 (reference 5) which makes reference to previous Amendments 23 and 4 to plant TSs for VEGP Units 1 and 2, respectively, in NRC SE dated September 12, 1989 (reference 6).

The relief is requested for the third ISI interval at VEGP Units 1 and 2, and all subsequent ISI intervals.

3.2.7 Staff Evaluation:

Paragraph IWL-2523 of the ASME Code requires one sample tendon of each type to be completely detensioned, a single-wire or strand be removed from each detensioned tendon and examined for corrosion and mechanical damage. In addition, each removed wire or strand from the detensioned tendons shall be tensioned and tested to determine its yield strength, ultimate tensile strength, and elongation. The licensee proposed to conduct lift-off testing on VEGP Unit 2 at the same time frame as the lift-off testing and examining/testing a strand removed from a detensioned sample tendon of each tendon type on VEGP Unit 1, and crediting the results of the VEGP Unit 1 strand examination/testing for VEGP Unit 2.

The NRC staff finds that since VEGP is a site with two containment units, similarly exposed to the environment, and essentially identical in design, utilizing similar prestressing systems that were post-tensioned in the same year, the strand testing performed on the VEGP Unit 1

tendons at the same time frame as the VEGP Unit 2 lift-off testing, can be considered representative of the material condition of the VEGP Unit 2 tendons in real time. Further, the licensee's Amendments 23 and 4 for VEGP Units 1 and 2, respectively, was approved by the NRC on September 12, 1989. The amendments addressed the unique design consideration of the VEGP containments as stated in the basis for relief. The NRC staff, in its SE of September 12, 1989, noted that lift-off testing could be performed on VEGP Unit 2, but detensioning to take strand samples and retensioning would be very difficult for the licensee to perform. Also, a similar (not identical) relief request RR-L-3, was authorized for the second ISI interval at VEGP in reference 5.

Based upon the prior approval by the NRC staff of TS Amendments 23 and 4, the completion of lift-off testing on VEGP Unit 2, and the concurrent tendon detensioning and strand material testing on VEGP Unit 1 sample tendons (as committed to by the licensee in the schedule provided in Table 1 of RR VEGP-ISI-ALT-04 (Version 3.0), which is also being authorized by this SE), the staff finds that a reasonable assurance of continued structural integrity of the Unit 2 post-tensioning system will be maintained.

The NRC staff concludes that compliance with the ASME Code requirements in IWL-2523 are impractical to perform for VEGP Unit 2, to the extent required, giving consideration to the unique design and construction of the VEGP Unit 2 post-tensioning tendon anchorages. Furthermore, the NRC staff has determined that the licensee's proposed alternative is authorized by law and will not endanger life or property or the common defense and security, and is otherwise in the public interest. Therefore, the NRC staff grants the RR, VEGP-ISI-RR-01, pursuant to 10 CFR 50.55a(g)(6)(i) for the third (May 31, 2007 through May 30, 2017) and subsequent ISI intervals at VEGP, Unit 2. The staff reiterates that the technical basis for accepting the proposed alternative is that the strand examination and testing on VEGP Unit 1 (Item L2.20 in Table IWL-2500-1), for each tendon type, that will be credited for VEGP Unit 2 (in lieu of strand testing the VEGP Unit 2 tendon types) are performed during the same time frame as the lift-off testing (Item L2.10 in Table IWL-2500-1) of the VEGP Unit 2 tendons for all ISI intervals the relief is applied.

4.0 CONCLUSION

Based on the information provided in the licensee's submittals (References 1 through 4), and the NRC staff's evaluation above, the NRC staff concludes the following:

(1) RR VEGP-ISI-ALT-04, Version 3.0, is authorized, pursuant to 10 CFR 50.55a(a)(3)(i), for VEGP, Units 1 and 2, on the basis that the licensee's proposed alternative provides an acceptable level of quality and safety. RR VEGP-ISI-ALT-04, Version 3.0, is authorized for the third ISI interval for VEGP Units 1 and 2. The relief is also authorized for subsequent ISI intervals at VEGP, provided the examination schedule in IWL-2400 for concrete and unbonded post-tensioning system, in the applicable Code of Record for these subsequent intervals, in accordance with 10 CFR 50.55a(g)(4)(ii), remain the same as that of the ASME Code of Record for the third ISI interval (ASME Code, Section XI, 2001 Edition through the 2003).

(2) RR VEGP-ISI-RR-01, Version 1.0, is granted for VEGP Unit 2, pursuant to 10 CFR 50.55a(g)(6)(i), on the basis that conformance with the specified ASME Code requirements is impractical due to the unique design and construction of the VEGP Unit 2 post-tensioning tendon anchorages and that the licensee's proposed alternative is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. The relief is granted for the third (May 31, 2007 thru May 30, 2017) and subsequent ISI intervals at VEGP Unit 2. The NRC staff reiterates that the technical basis for accepting the proposed alternative is that the strand examination and testing on VEGP Unit 1 (Item L2.20 in Table IWL-2500-1), for each tendon type, that will be credited for VEGP Unit 2 (in lieu of strand testing VEGP Unit 2 tendon types) are performed during the same timeframe as the lift-off testing (Item L2.10 in Table IWL-2500-1) of the VEGP Unit 2 tendons for all ISI intervals the relief is applied.

5.0 REFERENCES

1 Letter dated April 23, 2009, from M.J. Ajluni, SNC, to NRC submitting relief request VEGP-ISI-RR-01, Version 1.0, ADAMS Accession No. ML091140341.

2. Letter dated September 9, 2009, from M.J. Ajluni, SNC, to NRC regarding VEGP-ISI-RR-01, Version 1.0 (Unit 2), ADAMS Accession No. ML092520157.

3. Letter dated October 26, 2009, from M.J. Ajluni, SNC, to USNRC providing supplemental Information for VEGP-ISI-RR-01, Version 1.0, ADAMS Accession No. ML093000084.

4 Letter dated February 25, 2010, from M.J. Ajluni, SNC, to NRC responding to request for additional information for VEGP-ISI-ALT-04, ADAMS Accession No. ML100570152.

5. Letter dated June 16, 2000, from USNRC to Mr. J.B. Beasley, Jr., SNC, granting relief for containment ISI program for the First 10-year Interval for VEGP, ADAMS Accession No. ML003724175.

6. Letter dated September 12, 1989, from the NRC to Mr. W.G. Hairston III, Georgia Power Company, regarding Issuance of Amendment No. 23 to Facility Operating License NPF-68 and Amendment No. 4 to Facility Operating License NPF-81 – VEGP, Units 1 and 2, ADAMS Accession No. ML012290003.

Principal Contributor: George Thomas, NRR/DE

Date of issuance: June 11, 2010

If you have any questions concerning this action, please contact Robert Martin of my staff at 301-415-1493.

Sincerely,

/RA/

Gloria Kulesa, Branch Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

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NAME	PBoyle	RMartin	SRohrer	MKhanna*	GKulesa (w/ comments)
DATE	06/09/10	06/09/10	04/01/10	03/19/10	06/11/10

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