Southern Nuclear
Operating Company, Inc.
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October 24, 2017

Docket Nos.: 52-025
52-026

ND-17-1697
10 CFR 50.55a

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

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Units 3 and 4
Request for Alternative:
Elimination of External Surface Defects on Class 1, 2, and 3 Piping, Pumps, or Valves After Component Stamping and Prior to Completion of the N-3 Data Report
(VEGP 3&4-PSI/ISI-ALT-09)

Ladies and Gentlemen:

Pursuant to 10 CFR 50.55a(z)(1), Southern Nuclear Operating Company (SNC) hereby requests NRC authorization to use an alternative to the requirements of ASME Section III, NB/NC/ND-2000 and NB/NC/ND-4000, of the ASME Boiler and Pressure Vessel (B&PV) Code, 1998 Edition through the 2000 Addenda (code of record) for Vogtle Electric Generating Plant (VEGP) Units 3 and 4. The proposed request for alternative is applicable to removal of external defects for Class 1, 2, and 3 components.

The details of the 10 CFR 50.55a(z)(1) request are contained in the enclosure to this letter. Approval is requested by April 24, 2018 as a contingency to support removal of external defects on Class 1, 2, and 3 piping, pumps, and valves identified during construction activities.

This letter contains no regulatory commitments. Should you have any questions, please contact Mr. Corey Thomas at (205) 992-5221.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 24th day of October 2017.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

Amy G. Aughtman
Licensing Director, Nuclear Development
Southern Nuclear Operating Company

AGA/BCT/ljs

Enclosure: Proposed Alternative VEGP 3&4-PSI/ISI-ALT-09 in Accordance with 10 CFR 50.55a(z)(1) – Alternative Requirements for Elimination of External Surface Defects on Class 1, 2, and 3 Piping, Pumps, or Valves After Component Stamping and Prior to Completion of the N-3 Data Report

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Southern Nuclear Operating Company

ND-17-1697

Enclosure

Vogtle Electric Generating Plant (VEGP) Units 3 and 4

Proposed Alternative VEGP 3&4-PSI/ISI-ALT-09 in Accordance with 10 CFR 50.55a(z)(1) – Alternative Requirements for Elimination of External Surface Defects on Class 1, 2, and 3 Piping, Pumps, or Valves After Component Stamping and Prior to Completion of the N-3 Data Report

(Enclosure consists of 4 pages, not including this cover page.)

Proposed Alternative VEGP 3&4-PSI/ISI-ALT-09 in Accordance with 10 CFR 50.55a(z)(1) – Alternative Requirements for Elimination of External Surface Defects on Class 1, 2, and 3 Piping, Pumps, or Valves After Component Stamping and Prior to Completion of the N-3 Data Report

Plant Site-Unit:	Vogtle Electric Generating Plant (VEGP) – Units 3 and 4
Interval-Interval Dates:	Applies to construction and preservice inspection intervals.
Requested Date for Approval:	Approval is requested by April 24, 2018 to support construction activities.
ASME Code Components Affected:	ASME Class 1, 2, and 3 Piping, Pumps, and Valves subject to elimination of external surface defects after Component Stamping and Prior to Completion of the N-3 Data Report.
Applicable Code Edition and Addenda:	ASME B&PV Code, Section III, 1998 Edition through the 2000 Addenda (code of record).
Applicable Code Requirements:	ASME Section III NB/NC/ND-2000 and NB/NC/ND-4000 includes requirements for Elimination of Surface Defects. These requirements are applied to a component (piping, pump, or valve) prior to the component receiving an N stamp. ASME Section XI covers repair and replacement of ASME Class 1, 2, and 3 components. Southern Nuclear Operating Company's (SNC's) Section XI repair and replacement program will not be applicable to VEGP 3&4 until after the 10 CFR Part 52.103(g) finding. This time period coincides with the completion of the N-3 Data Report. Therefore, prior to the 10 CFR Part 52.103(g) finding, removal of external defects can be performed on a component (piping, pump, or valve) by the N or NA Certificate Holder.
Reason for Request:	Removal of external surface defects will be required following receiving N-stamped components from vendors due to the nature of performance of construction activities (e.g., arc strikes, scratches, dents). ASME Section III does not address these activities for an N or NA Certificate Holder following receipt of a component with an

	N-stamp. SNC's Section XI repair and replacement program will not be applicable to VEGP 3&4 until after the 10 CFR Part 52.103(g) finding. This time period coincides with the completion of the N-3 Data Report. This alternative addresses the time period between a component (piping, pump or valve) being stamped and prior to completion of the N-3 Data Report in the execution of specific removal of external defects performed by an N or NA Certificate Holder.
Proposed Alternative and Basis for Use:	**Proposed Alternative:** Defects on external surfaces of previously stamped piping, pumps, or valves may be eliminated by an N or NA Certificate Holder at a location authorized by their certificate in accordance with their Quality Assurance Program and the following requirements: *(a)* The defect is eliminated via mechanical means only (e.g., buffing, grinding). *(b)* The depth of the surface defect elimination does not exceed 3/8 in. (10 mm) or 10% of the thickness, whichever is less. *(c)* It is verified that elimination of the defect has not reduced the thickness of the section below that required by Article NB/NC/ND-3000, and that Design Specification requirements were satisfied. *(d)* Except for castings, the elimination of the surface defect is performed in accordance with the requirements of NB/NC/ND-2538, NB/NC/ND-2548, NB/NC/ND-2558, NB/NC/ND-2568 for the applicable product form, or NB/NC/ND-4452 for weld metal defects, except that repair by welding is not permitted. *(e)* For castings, surface defects shall be removed by grinding or machining provided the requirements of (1) and (2) below are met: *(1)* The depression, after defect elimination, is blended uniformly into the surrounding surface. *(2)* After defect elimination, the area is examined by the magnetic particle method in accordance with NB/NC/ND-2577 or the liquid penetrant method in accordance with NB/NC/ND-2576 to assure that the defect has been removed or reduced to an imperfection of acceptable size. *(f)* The elimination is documented by the N or NA Certificate Holder within the Remarks section of the N-5 Data Report for the assembly or installation that included the component. *(g)* The N-5 Data Report shall identify this code alternative. Revision of

	completed N-5 Data Reports to identify this code alternative is permitted. Component or system pressure tests required by Article NB/NC/ND-6000 need not be repeated after the elimination of the surface defect. **Basis for Use:** The proposed alternative builds upon current ASME Section III requirements and logic. Based on the provisions of ASME Section III NB/NC/ND-6115, a post repair pressure test is not required following removal of less than 3/8 in. (10 mm) or 10% of the thickness, whichever is less. These dimensions put clear limitations regarding the amount of material that may be removed. In addition, in accordance with ASME Section III NB/NC/ND-3000, the proposed alternative ensures that the amount of material removed does not violate design requirements or Design Specification requirements. Except for castings, elimination of a surface defect requires surface examination in accordance with the applicable product form requirements documented in ASME Section III NB/NC/ND-2538, -2548, -2558, -2568, and -4452. This ensures that the surface is examined in the same manner as would be required during original construction. For castings, the requirements are consistent with NB/NC/ND-2573.7. Castings are called out separately as the title currently existing within NB/NC/ND-2573 is “Provisions for Repair of Base Material by Welding” and this clarifies that no weld repair is being proposed by this alternative. Revision of the N-5 Data Report is specifically identified as permitted to clarify that this code alternative may be implemented if a surface defect is encountered after the Code stamping of a piping system (or pump or valve in the system) has been completed. It is recognized that a system component may require removal of an external surface defect (e.g., system “A” has been completed and stamped, and a welder is working on an adjacent system “B.” In the event the welder creates an arc strike on the completed system “A,” this code alternative provides requirements on how to address the surface defect, its removal, and where to document the code alternative had been used for Owner reference during future Section XI – Repair/Replacement activities). The proposed alternative is consistent with design rules for performance of the removal of external surface defects prior to a component receiving its N-stamp and only applies to piping, pumps, and valves. Removal of minor surface defects can be performed by an

	N or NA Certificate Holder at a location authorized by their certificate following adherence to the requirements in this alternative that is built upon ASME Section III requirements. Since the proposed alternative is consistent with ASME Section III requirements prior to a component receiving its N-stamp and provides specific limitations for removal of external defects, this proposed alternative provides an acceptable level of quality and safety in accordance with 10 CFR 50.55a(z)(1).
Duration of Proposed Alternative:	Until the 10 CFR Part 52.103(g) finding
References:	None.
Status:	Awaiting NRC authorization