UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
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January 31, 2018

Michael Yox
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7825 River Road
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SUBJECT: ERRATA FOR VOGTLE UNIT 3 COMBINED LICENSE, VOGTLE UNIT 4 COMBINED LICENSE NRC INTEGRATED REPORTS 05200025/2016004, 05200026/2016004

Dear Mr. Yox:

On February 13, 2017, the U.S. Nuclear Regulatory Commission (NRC) issued the subject report, Agencywide Documents Access and Management System (ADAMS) Accession Number ML17044A539. In reviewing this report, the NRC found that further clarification was required for the Cross Cutting Area associated with the Green Non-Cited Violation (NCV) 2016004-001 and for the Construction Significance Determination for the Green NCV 2016004-002. Accordingly, we are providing a revised version. We request that you replace pages 2, 38 and 43 of the report with the revised pages in the Enclosure to this letter.

In accordance with 10 CFR 2.390, “Public inspections, exemptions, requests for withholding,” of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC’s ADAMS. ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room). To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction.

Sincerely,

/RA/

Jamie Heisserer, Chief
Construction Inspection Branch 1
Division of Construction Oversight

Docket Nos.: 5200025, 5200026
License Nos: NPF-91, NPF-92

Enclosure: Replacement pages 2, 38 and 43 for NRC Integrated Inspection Reports 05200025/2016004 and 05200026/2016004

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SUBJECT: ERRATA FOR VOGTLE UNIT 3 COMBINED LICENSE, VOGTLE UNIT 4 COMBINED LICENSE NRC INTEGRATED REPORTS 05200025/2016004, 05200026/2016004

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Unit 3 and Unit 4 ITAAC 760 requires that all deviations between the as-built containment internal structures and the approved design be reconciled (evaluated) such that the as-built structure would withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure of these welds to meet the American Welding Society (AWS) D1.1:2000 and AWS D1.6:1999 visual weld acceptance criteria represented a nonconformance with the approved structural design, which if left uncorrected, represented a deviation from the design that would not have been reconciled by the licensee. The inspectors screened the finding for a possible construction safety focus component (CSFC) aspect in accordance with Appendix F, “Construction Cross-Cutting Areas and Aspects,” of IMC 0613, “Power Reactor Construction Inspection Reports.” This finding has a cross-cutting aspect in the area of Safety Conscious Work Environment, avoid complacency, because the licensee did not assure that individuals adequately recognized and planned for the possibility of mistakes, latent issues, and inherent risk while expecting successful outcomes, in that multiple QC inspectors failed to consider that the ends of the Complete Joint Penetration (CJP) welds were within the scope of the inspection and even though the front sides of the welds were satisfactory the ends were nonconforming. [H.12]. (Section 1A32)

Green: The inspectors identified an ITAAC finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion IX, “Control of Special Processes” for Southern Nuclear Operating Company’s (SNC) failure through their contractor Westinghouse Electric Company (WEC) to adequately implement measures to assure that special processes, including welding, are accomplished in accordance with applicable codes. The licensee entered this finding into their corrective action program as SNC CR 10320757 and WEC CAPAL System Issue ID 100436639.

The inspectors concluded the finding was associated with the Construction/Installation Cornerstone. The finding was considered more-than-minor because the performance deficiency represented a substantive failure to adequately implement a quality assurance (QA) measure that rendered the quality of an SSC indeterminate. The finding is also similar to IMC 0613, “Power Reactor Construction Inspection Report”, Appendix E, example 6 which indicates, in part, that a WPS qualification issue is not minor if it is related to a change in an essential variable, and the WPS was required to be re-qualified. The inspectors evaluated the finding in accordance with IMC 2519, “Construction Significance Determination Process,” and determined the finding was of very low safety significance (Green) because the finding affected a portion of a structure in the intermediate column of the risk importance table. The inspectors determined that the finding represented an ITAAC finding because it was material to the acceptance criteria of VEGP Unit 3 ITAAC 761, in that, if left uncorrected, the licensee may not have been able to demonstrate that the acceptance criteria of this ITAAC was met. The acceptance criteria of this ITAAC require that all deviations between the as-built structures and the approved designs be reconciled to verify that the as-built structures will withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure to adequately implement measures to assure that special processes, including welding, are accomplished in accordance with applicable codes may have resulted in a deviation from the approved design that would not have been reconciled by the licensee. The inspectors

Unit 3 and Unit 4 ITAAC 760 requires that all deviations between the as-built containment internal structures and the approved design be reconciled (evaluated) such that the as-built structure would withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure of these welds to meet the American Welding Society (AWS) D1.1:2000 and AWS D1.6:1999 visual weld acceptance criteria represented a nonconformance with the approved structural design, which if left uncorrected, represented a deviation from the design that would not have been reconciled by the licensee. The inspectors screened the finding for a possible construction safety focus component (CSFC) aspect in accordance with Appendix F, “Construction Cross-Cutting Areas and Aspects,” of IMC 0613, “Power Reactor Construction Inspection Reports.” This finding has a cross-cutting aspect in the area of Human Performance, avoid complacency, because the licensee did not assure that individuals adequately recognized and planned for the possibility of mistakes, latent issues, and inherent risk while expecting successful outcomes, in that multiple QC inspectors failed to consider that the ends of the Complete Joint Penetration (CJP) welds were within the scope of the inspection and even though the front sides of the welds were satisfactory the ends were nonconforming. [H.12]. (Section 1A32)

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Enforcement

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that conditions adverse to quality, such as nonconformances, are promptly identified and corrected.

Table 6.1, "Visual Inspection Acceptance Criteria," of AWS D1.1, "Structural Welding Code - Steel," 2000 edition and Section 6.28.1.2 of AWS D1.6 - 1999 edition, states in part, "Weld/Base-Metal Fusion - thorough fusion shall exist between adjacent layers of weld metal and between weld metal and base metal."

Contrary to the above, as of December 12, 2016, the licensee failed to identify and correct conditions adverse to quality, in that QC inspectors failed to identify at least 33 nonconforming welds between Unit 3 and Unit 4 structural modules and the containment internal structures basemat. Specifically, QC inspectors failed to identify that the welds documented in the following N&Ds did not have thorough fusion between adjacent layers of weld metal and therefore did not meet the visual acceptance criteria established by the AWS D1.1:2000 and AWS D1.6:1999 codes:

- SV3-CA01-GNR-000958 (Unit 3 CA01) - 19 welds;
- SV3-CA02-GNR-000069 (Unit 3 CA02) - 8 welds;
- SV4-CA05-GNR-000028 (Unit 4 CA05) - 6 welds;

Because this violation was of very low safety significance (Green) and it was entered into the licensee’s corrective action program as CR 10308295 and CAPAL 100436977, this violation is being treated as an NCV (NCV 05200025/2016004-01 and 05200026/2016004-01, "Failure to identify nonconforming embed plate welds," consistent with Section 2.3 of the NRC Enforcement Policy and EGM 11-006.

This NCV will remain open until the licensee restores the welds to an acceptable condition (closure of the above N&Ds), and the acceptance criteria for ITAAC 760 is no longer impacted.

1A33 (Unit 3) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

The inspectors screened the finding for a possible CSFC aspect in accordance with Appendix F, “Construction Cross-Cutting Areas and Aspects,” of IMC 0613, “Power Reactor Construction Inspection Reports.” This finding has a cross-cutting aspect in the area of Human Performance, avoid complacency, because the licensee did not assure that individuals adequately recognized and planned for the possibility of mistakes, latent issues, and inherent risk while expecting successful outcomes, in that multiple QC inspectors, failed to consider that the end of the CJP welds were within the scope of the inspection and even though the front side of the welds were satisfactory the ends were nonconforming. [H.12]

Enforcement

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1A33 (Unit 3) ITAAC Number 3.3.00.02a.i.a (760) / Family 01F

rendered the quality of an SSC indeterminate. The finding is also similar to IMC 0613, Power Reactor Construction Inspection Report, Appendix E, example 6 which indicates, in part, that a WPS qualification issue is not minor if it is related to a change in an essential variable, and the WPS was required to be re-qualified.

The inspectors determined that the finding represented an ITAAC finding because it was material to the acceptance criteria of VEGP Unit 3 ITAAC 761, in that, if left uncorrected, the licensee may not have been able to demonstrate that the acceptance criteria of this ITAAC was met. The acceptance criteria of this ITAAC require that all deviations between the as-built structures and the approved designs be reconciled to verify that the as-built structures will withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure to adequately implement measures to assure that that special processes, including welding, are accomplished in accordance with applicable codes may have resulted in a deviation from the approved design that would not have been reconciled by the licensee.

The inspectors concluded the finding was associated with the Construction/ Installation Cornerstone. The inspectors evaluated the finding in accordance with IMC 2519, “Construction Significance Determination Process,” and determined the finding was of very low safety significance (Green) because the finding affected a portion in the intermediate column of the risk importance table.

The inspectors reviewed the finding for a possible cross-cutting aspect in accordance with IMC 0613 Appendix F, “Construction Cross-Cutting Areas and Aspects,” and determined the finding has a cross-cutting aspect in the Human Performance area because the licensee did not recognize that the WPS was not qualified in accordance with AWS D1.4-98. [H.9].

Enforcement

10 CFR Part 50, Appendix B, Criterion IX, “Control of Special Processes,” requires in part, that “measures shall be established to assure that special processes, including welding, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.”

VEGP U3 UFSAR Section 3.8.4.4.1, “Seismic Category I Structures,” states, in part that the design and analysis procedures for the seismic Category I concrete structures are in accordance with ACI 349.

ACI 349-01, Section 12.14.3, "Welded Splices and Mechanical Connections," requires, in part, that, all welding shall conform to “Structural Welding Code - Reinforcing Steel” (AWS D1.4).

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The inspectors concluded the finding was associated with the Construction/ Installation Cornerstone. The inspectors evaluated the finding in accordance with IMC 2519, Appendix A, “AP 1000 Construction Significance Determination Process,” and determined the finding was of very low safety significance (Green) because the finding was associated with a structure assigned to the intermediate column of the AP1000 Construction Significance Determination Matrix, and there is reasonable assurance that the structure can meet applicable design functions.

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