Entergy

Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043
Tel 269 764 2000

Otto W. Gustafson
Director, Regulatory Assurance and
Performance Improvement

PNP 2015-093

November 30, 2015

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

Subject: Response to Non-Cited Violation Dated October 30, 2015

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

References: Palisades Nuclear Plant NRC Integrated Inspection Report 05000255/2015003

Dear Sir or Madam:

In the referenced inspection report, the Nuclear Regulatory Commission (NRC) issued a finding of very low safety significance (Green), and an associated non-cited violation (NCV) of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion III, "Design Control," for the failure to justify continued service of safety-related electrolytic capacitors installed beyond their recommended service life. These capacitors are associated with Palisades' containment floor water level indicating transmitters (LIT), LIT-0446A and LIT-0446B.

After further review and consideration of NCV 05000255/2015003-1, Entergy Nuclear Operations, Inc. (ENO) does not contest that a performance deficiency exists. However, ENO does not agree that the performance deficiency was in violation of 10 CFR 50, Appendix B, Criterion III. Accordingly, ENO is not aligned with the staff's position of the criterion violated and believes 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" is appropriate. The basis for ENO's position of the criterion violated is enclosed.

If you have any questions or require additional information, please contact Mr. Jeff Hardy, Regulatory Assurance Manager at (269) 764-2011.

This letter contains no new commitments and no revisions to existing commitments.

Sincerely,

OWG/tad

Attachment 1: Response to Non-Cited Violation Dated October 30, 2015

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

Section 1R15.b of the Palisades Nuclear Plant NRC Integrated Inspection Report No. 05000255/2015003 issued by the U.S. Nuclear Regulatory Commission and dated October 30, 2015 contains, in part, the following green non-cited violation (NCV):

> Introduction: An NRC-identified finding of very low safety significance (Green) and an associated Non-Cited Violation (NCV) of 10 CFR 50, Appendix B, Criterion III, "Design Control," was identified for the failure to justify continued service of safety-related electrolytic capacitors installed beyond their recommended service life associated with containment floor LITs LIT–0446B and LIT–0446A.
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> Description: During the performance of monthly operations TS surveillance test MO–45, "Control Room Channel Checks," on June 21, 2015, LIT–0446B, the 'B' containment LIT, was found to be indicating below the acceptance criteria minimum required value. The transmitter was declared inoperable in accordance with TS 3.3.7, "Post Accident Monitoring," since the accuracy over the entire level span of the instrument was considered degraded such that it could no longer perform its function to accurately monitor containment water level as specified by Regulatory Guide 1.97. These containment LITs are relied upon in the plant's emergency operating procedures to ensure adequate net positive suction head for emergency core cooling system (ECCS) pumps following receipt of a recirculation actuation signal (RAS).
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> On July 16, 2015, further troubleshooting was conducted and determined that the electrolytic capacitor within the transmitter's converter module failed and the most likely cause of the capacitor failure was operation beyond the component's service life since the LITs had been in service for greater than 10 years. Entergy subsequently submitted letter PNP 2015–058 to the NRC on August 3, 2015, reporting this information as required by TS 5.6.6. This specification states that if post-accident monitoring instrumentation is inoperable, a preplanned alternate method of monitoring, the cause of the inoperability, and the schedule for restoring the inoperable instrument to an operable status shall be submitted in a report to the NRC.
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> The resident inspectors asked follow-up questions associated with industry operating experience and the preventive maintenance program for these transmitters. These LITs were replaced on an "as-required" basis (no preventive maintenance frequency) and were classified as non-critical components in the licensee's maintenance program. However, industry operating experience and Electric Power Research Institute guidance was found by the inspectors that indicated electrolytic capacitors have a specified lifespan based on operating conditions and applications. The NRC issued Information Notice (IN) 2012–11, "Age-Related Capacitor Degradation," in July 2012, which also informed licensees of problems that involved the age-related degradation of capacitors. The licensee documented a review of this IN in CR–PLP–2012–5721. However,

the licensee's preventive maintenance interval review of this operating experience only considered electrolytic capacitors that were classified as critical components in their maintenance rule program. The capacitors which were identified during this review were scheduled for, at most, 10 year replacement intervals. The licensee potentially missed the opportunity to establish a replacement program for these transmitters at that time. In addition to entering this issue into their CAP as CR–PLP–2015–04972, the licensee replaced the failed components and planned to develop a replacement schedule for non-critical, safety-related electrolytic capacitors.

Analysis: The inspectors determined that the failure to review for suitability of application of the safety-related electrolytic capacitors in the containment floor LITs, which were installed beyond their recommended service life, was contrary to 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and was a performance deficiency.

The inspectors determined that the performance deficiency was more than minor in accordance with Inspection Manual Chapter (IMC) 0612 "Power Reactor Inspection Reports," Appendix B, "Issue Screening," dated September 7, 2012, because the performance deficiency was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The containment water LITs are relied upon in the plant's emergency operating procedures to ensure adequate net positive suction head for ECCS pumps following a RAS. The finding was screened in accordance with IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 1, "Mitigating Systems Screening Questions," dated July 1, 2012. The finding screened as having very low safety significance (i.e., Green) based on answering "No" to all the screening questions under the Mitigating SSCs and Functionality section of IMC 0609, Appendix A, Exhibit 1.

The finding had a cross-cutting aspect of Operating Experience in the Problem Identification and Resolution cross-cutting area since the licensee did not effectively and thoroughly evaluate and implement relevant industry operating experience and guidance for age-related electrolytic capacitor degradation [P.5].

Enforcement: 10 CFR 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of SSCs.

Contrary to the above, as of June 21, 2015, the licensee failed to review for suitability of application of parts essential to the safety-related functions of the containment floor level indicating system. Specifically, the licensee did not review

for suitability of application of safety-related electrolytic capacitors in the containment floor LITs that were installed beyond their recommended service life to justify their continued service considering in-service deterioration. As part of their immediate corrective actions, the licensee replaced the failed components. Because this violation was of very low safety significance and it was entered into the licensee's CAP as CR–PLP–2015–04972, it is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (NCV 05000255/2015003–01 Failure to Justify Continued Service of Safety-Related Electrolytic Capacitors Installed Beyond Their Service Life)

Response

After review and evaluation of NCV 05000255/2015003-1, Entergy Nuclear Operations, Inc. (ENO) does not contest that a performance deficiency exists. However, ENO respectfully does not agree that the performance deficiency is in violation of 10 CFR 50, Appendix B, Criterion III.

It is realized by ENO that not having a preventative maintenance schedule in place for the safety-related capacitors installed in LIT-0446A and LIT-0446B was not consistent with 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," which requires that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Also, as recognized in the Inspection Report, this issue is being appropriately addressed, within the ENO Corrective Action Program, in a timely manner coincident with the issue's safety significance.

Basis for Response

ENO understands that regulatory requirements and NRC endorsed quality assurance program standards do not require licensees to strictly adhere to vendor recommendations or formally evaluate deviations from those recommendations under the Appendix B quality assurance program. Taking that into consideration, ENO concludes that failures to establish or maintain appropriate maintenance schedules should be characterized as violations of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

Regulatory Guide 1.33, Revision 2, Quality Assurance Program Requirements, Regulatory Position states that, "The overall quality assurance program requirements for the operation phase that are included in ANSI N18.7-1976/ANS-3.2 are acceptable to the NRC staff and provide an adequate basis for complying with the quality assurance program requirements of Appendix B to 10 CFR Part 50,....." This position

is subject, in part, to the procedures listed in Appendix A, Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors. Appendix A, Number 9, Procedures for Performing Maintenance 9.b states, "Preventive maintenance schedules should be developed to specify lubrication schedules, inspections of equipment, replacement of such items as filters and strainers, and inspection or replacement of parts that have a specific lifetime such as wear rings." ANSI N18.7-1976, Section 5.2.7.1, Maintenance Programs, requires that a maintenance program be developed to maintain safety related systems, structures and components (SSCs) at the quality required for them to perform their intended safety functions. Section 5.2.7.1 states, "As experience is gained in operations of the plant, routine maintenance should be altered to improve equipment performance,..." "A preventive maintenance program.....shall be established and maintained which prescribes the frequency and type of maintenance to be performed. A preliminary program based on service conditions and experience with comparable equipment should be developed prior to fuel loading. The program should be revised and updated as experience is gained with the equipment."

Neither Regulatory Guide 1.33, Revision 2, nor ANSI N18.7-1976 require replacement of parts or components based specifically on vendor recommendations provided as part of the design process of 10 CFR 50 Appendix B. Instead, the documents require the establishment of maintenance schedules. The guidelines in ANSI N18.7-1976 provide additional requirements that the preventive maintenance program be based on service conditions and operating experience with similar equipment.

Additionally, ENO does not agree that vendor recommended service life constitutes design bases information as defined in 10 CFR 50.2 since it does not identify the functions to be performed by a SSC nor does it identify the specific values or ranges of values chosen for controlling parameters as reference bounds for design. Technical information such as vendor recommended service life is used to inform the design of a SSC, but does not establish design acceptance criteria.

With that said, ENO agrees that there has been a failure to establish and enact an appropriate maintenance schedule and that this performance deficiency should be characterized as a violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

Finally, while TIA 2014-01 "Final Task Interface Agreement – Regulatory Position on Design Life of Safety-Related Systems, Structures, and Components Related to Unresolved Items at Donald C. Cook Nuclear Power Plant, Monticello Nuclear Generating Plant, and Palisades Nuclear Plant" is not cited in the referenced inspection report, this document's rationale is heavily relied upon. ENO understands that the NRC has rescinded or withdrawn TIA 2014-001 and is in the process of developing a related Regulatory Issue Summary (RIS), which will be subject to additional reviews and a stakeholder comment period. ENO's position is that it is premature to release a finding that heavily relies on a withdrawn or rescinded TIA while the related RIS is being drafted.

Conclusion

In summary, the finding and associated NCV for safety related electrolytic capacitors installed longer than the vendor recommended service life is inappropriately associated with 10 CFR 50 Appendix B, Criterion III, "Design Control," because vendor recommended service life is technical information that should, when appropriate, be integrated to inform the preventive maintenance procedures for the capacitors in question as required by 10 CFR 50 Appendix B, Criterion V "Instructions, Procedures, and Drawings."