



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
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March 20, 2020

EA-15-206

Mr. Christopher Church
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company, Minnesota
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: REVISED NON-CITED VIOLATION—MONTICELLO NUCLEAR
GENERATING PLANT NRC COMPONENT DESIGN BASES INSPECTION
REPORT 05000263/2015007 (NCV 05000263/2015007-02; FAILURE TO
REVIEW FOR SUITABILITY OF APPLICATION OF SAFETY-RELATED
RELAYS INSTALLED BEYOND THEIR SERVICE LIFE)

Dear Mr. Church:

On October 2, 2015, Monticello Nuclear Generating Plant (MNGP) provided a written response to U.S. Nuclear Regulatory Commission (NRC) Inspection Report 05000263/2015007, which was issued on September 2, 2015. Specifically, the letter contested Non-Cited Violation 05000263/2015007-02 associated with the failure to justify continued service of safety-related relays and motor starter contactors installed beyond their service life. The letter explained MNGP agreed a performance deficiency occurred but disagreed the deficiency was associated with a violation of Title 10 of the *Code of Federal Regulations* (CFR), Part 50, Appendix B, Criterion III, "Design Control," as stated in the inspection report. The letter further stated MNGP believed the performance deficiency was associated with 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

The NRC carefully reviewed MNGP's reply and determined the Non-Cited Violation should be changed to a violation of Technical Specifications 5.4.1, "Procedures," as shown in the enclosed assessment. Technical Specification 5.4.1, requires, in part, the establishment, implementation, and maintenance of written procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Section 9 of the Regulatory Guide requires the development of preventive maintenance schedules and associated procedures for the inspection or replacement of parts that have a specific lifetime. The bases for the staff's conclusion are detailed in the enclosed report.

This letter, its enclosure, MNGP's October 2, 2015, response, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Kenneth G. O'Brien, Director
Division of Reactor Safety

Docket No. 50-263
License No. DPR-22

Enclosure:
NRC Staff Assessment of Disputed
NCV 05000263/2015007-02

cc: Distribution via LISTSERV®

Letter to Christopher Church from Kenneth G. O'Brien dated March 20, 2020.

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NRC STAFF ASSESSMENT OF DISPUTED NCV 05000263/2015007-02

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed information provided in the Monticello Nuclear Generating Plant (MNGP) letter dated October 2, 2015. This review was performed by staff members having relevant technical and regulatory knowledge. Documents referenced are listed in the Reference Section of this Enclosure.

1. BACKGROUND

During the 2012 Problem Identification and Resolution inspection, Unresolved Item (URI) 05000263/2012008-01 was opened related to the qualification basis for safety-related relays and motor starter contactors. The URI identified concerns regarding the acceptability of keeping specific safety-related relays and motor starter contactors installed in the plant for a period which exceeded the vendor recommended service life without an appropriate justification.

The inspectors, in consultation with Nuclear Reactor Regulation staff, issued Task Interface Agreement (TIA) 2014-01, "Final Task Interface Agreement – Regulatory Position on Design Life of Safety-Related Structures, Systems, and Components Related to Unresolved Items at Donald C. Cook Nuclear Power Plant, Monticello Nuclear Generating Plant and Palisades Nuclear Plant," on May 7, 2015. This TIA concluded "when a licensee becomes aware that a safety-related structure, system or component's (SSC's) service life has been exceeded or information challenges the presumption that a safety-related SSC can perform its specified function, the licensee must promptly address and document this non-conforming condition in accordance with the licensee's NRC approved Quality Assurance Program, the licensee's operability/functionality program and the corrective action program. This includes completing appropriate corrective actions in a timely manner and documenting evaluations justifying the service life extensions."

On September 2, 2015, the NRC issued Component Design Bases Inspection Report 05000263/2015007 that assessed, in part, the unresolved item discussed above. The NRC documented the closure of the URI as a finding of very-low safety significance (Green) and an associated Non-Cited Violation (NCV) of Title 10 of the *Code of Federal Regulations* (CFR), Part 50, Appendix B, Criterion III, for the failure to review for suitability of application of safety-related relays and motor starter contactors, which were installed beyond their service life. This inspection report dispositioned this issue as NCV 05000263/2015007-02. Immediate corrective actions included instituting a Relay Monitoring Program, performing generic service life evaluations on specific types of safety-related relays, and identifying and replacing relays that had exceeded the vendor recommended service life. The licensee continued to identify safety-related relays exceeding the vendor recommended service life and had plans to conduct extent of condition reviews. A separate corrective action item was initiated to evaluate motor starter contactors installed beyond the recommended service life.

On October 2, 2015, MNGP provided a written response to the NRC contesting the enforcement decision associated with NCV 05000263/2015007-02. Specifically, the letter explained MNGP agreed a performance deficiency occurred but disagreed it was associated with a violation of 10 CFR Part 50, Appendix B, Criterion III, as stated in the inspection report. Rather, MNGP stated the performance deficiency was associated with a violation of 10 CFR Part 50, Appendix B, Criterion V.

2. ORIGINAL ENFORCEMENT DECISION

The original enforcement decision as stated in Inspection Report 05000263/2015007 was: Title 10 CFR Part 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 structures, systems, and components.

Contrary to the above, as of July 24, 2015, the licensee failed to establish measures to ensure the selection and review for suitability of application of materials, parts, equipment, and processes that were essential to the safety-related functions of structures, systems or components. Specifically, the licensee did not review for suitability of application of safety-related Agastat and General Electric relays and motor starter contactors that exceeded their service life, a condition nonconforming to their design basis, to justify their continued service considering in-service deterioration.

3. LICENSEE POSITION

In a letter dated October 2, 2015, the licensee stated MNGP agreed a performance deficiency occurred but disagreed it was associated with a violation of 10 CFR Part 50, Appendix B, Criterion III, as stated in the inspection report. The letter further stated MNGP believed the performance deficiency was associated with 10 CFR Part 50, Appendix B, Criterion V. The basis for the licensee's position was, in part, that regulatory requirements (including Criterion V) required the establishment of maintenance schedules as opposed to strictly adhering to vendor recommendations or formally evaluating deviations from those recommendations under a quality assurance program established to meet 10 CFR Part 50, Appendix B. The licensee agreed it had not established a preventive maintenance schedule for replacing specific Agastat and General Electric relays or motor starter contactors. In addition, the licensee asserted that issuance of NCV 05000263/2015007-02 was premature because the underlying NRC staff position may be changed due to the ongoing development of a Regulatory Issue Summary (RIS) by the NRC.

4. NRC STAFF REVIEW

The NRC staff considered MNGP's assertion 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." The NRC staff agreed that a licensee may not have requirements involving strict adherence to vendor recommendations, unless specified in other design and licensing basis documents. However, the NRC staff determined that current regulations required licensees to establish quality assurance programs and supporting procedures that, among other things, set preventive maintenance schedules for the inspection or replacement of parts that have a specific lifetime.

In this case, the licensee's preventive maintenance template used for scheduling preventive maintenance activities established a specific lifetime for safety-related relays and contactors classified as critical components. However, no preventive maintenance schedule or associated procedures were developed for safety-related relays and motor starter contactors classified as "non-critical" components.

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As discussed in the licensee's letter, the failure to develop procedures to ensure continued quality of the safety-related relays and motor starter contactors during the equipment operational phase could be dispositioned as a violation of 10 CFR Part 50, Appendix B, Criterion V, which requires, in part, activities affecting quality to be prescribed by documented procedures of a type appropriate to the circumstances. Similarly, the issue could be dispositioned as a violation of Technical Specification Section 5.4.1, "Procedures," which requires, in part, the establishment, implementation, and maintenance of written procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Section 9 of the Regulatory Guide requires the development of preventive maintenance schedules and associated procedures for the inspection or replacement of parts that have a specific lifetime.

Finally, the staff considered the licensee's position that any inspection finding in this matter should await the development of a RIS. Since the licensee's letter, the NRC decided to not issue a RIS as explained in the Statements of Considerations published by the NRC in 83 FR 46199 (September 12, 2018). Instead of issuing a RIS, the NRC provided training to inspectors in 2018 to, in part, assist them in identifying and dispositioning issues related to how long safety-related structures, systems, and components remain in service and clarify the applicability of various regulations and industry standards.

5. CONCLUSION

The NRC staff carefully considered the information provided by MNGP in its letter dated October 2, 2015, and determined the original enforcement decision of NCV 05000263/2015007-02 should be modified as follows:

Technical Specification 5.4.1, "Procedures," states, in part, that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, "Quality Assurance Program Requirements," Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Revision 2, Appendix A, Section 9, "Procedures for Performing Maintenance," requires, in part, that preventive maintenance schedules shall be developed for the inspection or replacement of parts that have a specific lifetime.

Contrary to the above, as of July 24, 2015, the licensee failed to establish, implement and maintain applicable procedures recommended in Section 9 of Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Specifically, the licensee did not develop a preventive maintenance schedule for inspecting or replacing various safety-related relays and motor starter contactors classified as "non-critical", which had a specific lifetime.

6. REFERENCES

1. Letter from Mohammed A. Shuaibi to Aby S. Mohseni; "Final Task Interface Agreement—Regulatory Position on Design Life of Safety-Related Structures, Systems, and Components Related to Unresolved Items at Donald C. Cook Nuclear Power Plant, Monticello Nuclear Generating Plant, and Palisades Nuclear Plant (TIA 2014-01);" May 7, 2015.

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2. Letter from Christine A. Lipa to Mr. Peter A. Gardner; "Monticello Nuclear Generating Plant NRC Component Design Bases Inspection Report 05000263/2015007;" September 2, 2015.
3. Letter from Peter A. Gardner to the NRC Document Control Desk; "Response to Non-Cited Violation Dated September 2, 2015;" October 2, 2015.
4. Letter from Edwin M. Hackett to Victor M. McCree; "Committee to Review Generic Requirements: Minutes of Meeting Numbers 446 and 447;" October 17, 2017.
5. "Definitions;" 10 CFR 50.2; 2015-2017.
6. "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants;" 10 CFR Part 50, Appendix B; 2015-2017.
7. "Requirements for monitoring the effectiveness of maintenance at nuclear power plants;" 10 CFR 50.65; 2015-2017.
8. Regulatory Guide 1.33; February 1978; "Quality Assurance Program Requirements;" U.S. Nuclear Regulatory Commission; Washington, DC.
9. Regulatory Guide 1.186; December 2000; "Guidance and Examples for Identifying 10 CFR 50.2 Design Bases;" U.S. Nuclear Regulatory Commission; Washington, DC.
10. 34 FR 6599; "Quality Assurance Criteria for Nuclear Power Plants;" Federal Register; Volume 34; p. 6599; Washington, DC; April 17, 1969.
11. 35 FR 10498; "Quality Assurance Criteria for Nuclear Power Plants;" Federal Register; Volume 35; p. 10498; Washington, DC; June 27, 1970.
12. 48 FR 2729; "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants;" Federal Register; Volume 48; p. 2729; Washington, DC; January 21, 1983.
13. 60 FR 22478; "Nuclear Power Plant License Renewal;" Federal Register; Volume 60; p. 22478; Washington, DC; May 8, 1995.
14. 81 FR 30571; "Disposition of Information Related to the Time Period That Safety-Related Structures, Systems, or Components Are Installed;" Federal Register; Volume 81; p. 30571; Washington, DC; May 17, 2016.
15. 83 FR 46199; "Disposition of Information Related to the Time Period That Safety-Related Structures, Systems, or Components Are Installed;" Federal Register; Volume 83; p. 46199; Washington, DC; September 12, 2018.
16. NRC Enforcement Manual; Revisions 9 and 10.
17. NRC Enforcement Policy; February 4, 2015, and November 1, 2016.
18. Revised Appendix B to NEI 97-04; "Guidance and Examples for Identifying 10 CFR 50.2 Design Bases;" November 2000.

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19. Inspector Guidance (Training) on Service Life Issues;" June 2018; ML18219A470.
20. SL-009555; Preventive Maintenance Optimization for Agastat Relays using Refine Maintenance Optimization, Revision 0.
21. SL-009558; Preventive Maintenance Optimization for G.E. Relays using Refine Maintenance Optimization, Revision 0.
22. Issue ID 500001446684; MNGP Relay Program Issues; September 15, 2014.
23. Work Order 700029534-0010; One-Time Relay Replacement-23A-K9; June 13, 2018.