FINAL SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SARGENT & LUNDY LLC TOPICAL REPORT SL-TR-1, REVISION 27,

"NUCLEAR QUALITY ASSURANCE PROGRAM"

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1.0 INTRODUCTION

By letter dated April 1, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24094A163), Sargent & Lundy, LLC (S&L), requested approval of proposed changes to its "Nuclear Quality Assurance Program," Topical Report SL-TR-1 Rev. 27 (Ref. 1) (hereafter referred to as the QATR). The proposed revisions are considered changes to the U.S. Nuclear Regulatory Commission (NRC)-accepted quality assurance (QA) topical report (TR) from non-licensees (i.e., architect/engineers, nuclear steam supply system (NSSS) suppliers), in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," 50.4(b)(7)(ii). The proposed changes reflect commitments to updated regulatory guides (RGs) and organizational changes.

2.0 REGULATORY BASIS

The NRC's regulatory requirements related to QA programs are set forth in Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, and 10 CFR 50.4(b)(7), "Quality Assurance related submission, Item (ii)." The regulation at 10 CFR 50.4(b)(7)(ii) states, in part, "a change to an NRC-accepted QA topical report from non-licensees (i.e., architect/engineers, NSSS suppliers, fuel suppliers, contractors, etc.) must be transmitted to the NRC Document Control Desk." The NRC will review the proposed QATR for acceptability to ensure the applicable requirements of Appendix B to 10 CFR Part 50 will be satisfied.

Appendix B to 10 CFR Part 50 establishes QA requirements for the design, fabrication, construction, testing and operation of structures, systems, and components (SSCs) for the facility. The pertinent requirements of Appendix B to 10 CFR Part 50 apply to all activities affecting the safety-related functions of those SSCs and include designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, and modifying SSCs.

Regulatory Guide 1.28, “Quality Assurance Program Criteria (Design and Construction),” Revision 4 (Ref. 2), identifies the American Society of Mechanical Engineers (ASME) Nuclear Quality Assurance (NQA)-1-2008 and the NQA-1a-2009 Addenda “Quality Assurance Requirements for Nuclear Facility Applications,” as an acceptable basis for complying with the requirements of Appendix B to 10 CFR Part 50 with some exceptions.

3.0 EVALUATION

3.1 Proposed Changes

In evaluating the adequacy of the proposed change, the NRC staff considered the guidance of NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition,” Chapter 17.5, “Quality Assurance Program Description - Design Certification, Early Site Permit and New License Applicants,” Revision 1 (Ref. 3) (hereafter referred to as SRP Section 17.5).

The NRC staff utilized the guidance contained in SRP Section 17.5, which provides acceptance criteria for QA programs. SRP Section 17.5 is based on the NQA-1-2008/2009, as supplemented by additional regulatory and industry guidance for nuclear operating facilities. NQA-1-2008/2009, upon which the S&L QATR, Revision 27 is based, incorporates the supplemental guidance into a single document, and is therefore in alignment with SRP Section 17.5. In addition, NQA-1-2008/2009 is endorsed by RG 1.28, Revision 4.

Proposed changes made to the S&L QATR include references to updated revisions of the following RGs:

- RG 1.26, “Quality Group Classifications and Standards for, Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants” (Ref. 4).
- RG 1.29, “Seismic Design Classification for Nuclear Power Plants” (Ref. 5).
- RG 1.152, “Criteria for Programmable Digital Devices in Safety-Related Systems of Nuclear Power Plants” (Ref. 6).

S&L also proposed changes to the organization section of the S&L QATR to reflect recent organizational changes. The following positions will report to the Director of Operations:

- Director of Engineering & Innovation
- Director of Human Resources
- Director of Learning and Organizational Change and the Administrative Services Division

The Human Resources Division will be responsible for aspects of access authorization and fitness for duty.

Finally, the following positions will report to the Executive Vice President of Finance & Legal:

- Chief Financial Officer
- General Counsel & Director of Legal Services

The NRC staff reviewed the proposed changes and concluded that:

- The referenced updated versions of the relevant RGs describe method acceptable to the staff for meeting applicable regulatory requirements.

- S&L QATR continues to ensure that persons and organizations performing quality assurance functions have the required authority and organizational freedom and remain sufficiently independent from cost and schedule when opposed to safety considerations.
- S&L's commitment to Part I and Subparts 2.2, 2.4, 2.5, 2.7, 2.8, and 2.14 of Part II of NQA-1-2008/2009 remains unchanged and no new exceptions or deviations to NQA-1-2008/2009 are included in this revision.

- The revision of S&L's QATR, Revision 27, doesn't reduce the commitments in the QATR as previously accepted by the NRC.

3.2 Change Consistency

S&L submitted an update to the QATR to update the name of RG 1.152 to "Criteria for Programmable Digital Devices in Safety-Related Systems of Nuclear Power Plants" to be consistent with the name of the document of the referenced revision. The NRC staff confirmed that this editorial correction does not materially change the requirements. The NRC staff finds that the proposed changes are consistent with Chapter 17.5 of the SRP and, therefore, are acceptable.

4.0 CONCLUSION

The NRC staff used the acceptance criteria of NUREG-0800, SRP Section 17.5 as the basis for evaluating the acceptability of the S&L's QATR, Revision 27, for conformance with the applicable requirements of Appendix B to 10 CFR Part 50. The NRC staff concludes that S&L's QATR, Revision 27, follows the NRC guidance contained within and conforms to the format of NUREG-0800, Section 17.5, and concludes that there is reasonable assurance that S&L's QATR, Revision 27, will continue to meet the requirements of Appendix B to 10 CFR Part 50. Therefore, the NRC staff finds the S&L's proposed changes in the QATR, Revision 27, acceptable.

5.0 REFERENCES

1. Sargent & Lundy, LLC, Topical Report SL-TR-1 "Nuclear Quality Assurance Program" (ADAMS Accession No. ML24094A163), April 2024.

2. Regulatory Guide 1.28, "Quality Assurance Program Criteria (Design and Construction)," Revision 4 (ADAMS Accession No. ML100160003), September 2023.

3. NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition" (ADAMS Accession No. ML15037A441), August 2015.

4. Regulatory Guide 1.26, "Quality Group Classifications and Standards for, Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants" (ADAMS Accession No. ML21232A142), December 2021.

5. Regulatory Guide 1.29, “Seismic Design Classification for Nuclear Power Plants,” (ADAMS Accession No. ML21155A003), July 2021.

6. Regulatory Guide 1.152, “Criteria for Programmable Digital Devices in Safety-Related Systems of Nuclear Power Plants” (ADAMS Accession No. ML23054A463), July 2023.

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