

September 6, 2016

Mr. Randall L. Kurtz  
Quality Assurance Manager  
Sargent & Lundy, LLC  
55 East Monroe Street  
Chicago, IL 60603-5780

SUBJECT: FINAL SAFETY EVALUATION FOR SARGENT & LUNDY, LLC TOPICAL REPORT  
SL-TR-1A, REVISION 23 (TAC NO. MF6775)

Dear Mr. Kurtz:

By letter dated August 14, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15274A456), Sargent & Lundy, LLC (S&L) submitted for U.S. Nuclear Regulatory Commission (NRC) staff review the updated, S&L "Nuclear Quality Assurance Program," Topical Report (TR) SL-TR-1A, Revision 23 (hereafter referred to as the quality assurance TR). By letter dated August 11, 2016, an NRC draft safety evaluation (SE) regarding our approval of SL-TR-1A, Revision 23, was provided for your review and comments. By letter dated August 26, 2016, S&L responded with no comments on the draft SE.

The NRC staff concludes that S&L's SL-TR-1A, Revision 23, submittal satisfies the requirements for a quality assurance program as established by Appendix B to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50. The changes to the quality assurance program are consistent with 10 CFR 50.4(b)(7)(ii), and are therefore acceptable for referencing in licensing applications.

Our acceptance applies only to material provided in the subject TR. We do not intend to repeat our review of the acceptable material described in the TR. When the TR appears as a reference in license applications, our review will ensure that the material presented applies to the specific plant involved. License amendment requests that deviate from this TR will be subject to a plant-specific review in accordance with applicable review standards.

In accordance with the guidance provided on the NRC website, we request that S&L publish the accepted version of this TR within three months of receipt of this letter. The accepted version shall incorporate this letter and the enclosed final SE after the title page. The accepted versions shall include an "-A" (designating accepted) following the TR identification symbol.

R. Kurtz

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If future changes to the NRC's regulatory requirements affect the acceptability of this TR, S&L will be expected to revise the TR appropriately or justify its continued applicability for subsequent referencing. Licensees referencing this TR would be expected to justify its continued applicability or evaluate their plant using the revised TR.

Sincerely,

***/RA/***

Kevin Hsueh, Chief  
Licensing Processes Branch  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

Enclosure:  
Final SE

R. Kurtz

- 2 -

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Kevin Hsueh, Chief  
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Enclosure:  
Final SE

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**ADAMS Accession No.: ML16244A284; \*concurred via e-mail**

**NRR-106**

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**U. S. NUCLEAR REGULATORY COMMISSION**  
**FINAL SAFETY EVALUATION FOR SARGENT & LUNDY**  
**NUCLEAR QUALITY ASSURANCE PROGRAM TOPICAL REPORT**  
**SL-TR-1A, REVISION 23**

1.0 **INTRODUCTION**

By letter dated August 18, 2015, as supplemented by letter dated February 19, 2016, (References 1 and 2), Sargent and Lundy, LLC (S&L) submitted a change to Topical Report (TR) SL-TR-1A, "Nuclear Quality Assurance Program." The purpose of this proposed change is to use the latest guides for electronic records, storage, and management. Specifically, the following Nuclear Information and Records Management Association (NIRMA) Technical Guides (TGs) are being requested for use:

TG 11-2011, "Authentication of Records and Media,"  
TG 15-2011, "Management of Electronic Records,"  
TG 16-2011, "Software Quality Assurance Documentation and Records," and  
TG 21-2011, "Required Records Protection, Disaster Recovery and Business Continuation."

This proposed change allows use of the 2011 NIRMA TGs instead of the older 1998 versions, listed in Attachment 1 of Regulatory Issue Summary (RIS) 2000-018, "Guidance on Managing Quality Assurance Records in Electronic Media."

2.0 **REGULATORY EVALUATION**

The proposed change is for the electronic records, storage, and management program. The current regulatory bases for the quality assurance (QA) record program are listed below.

The Commission's regulatory requirements related to QA programs are set forth in Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50 and 10 CFR 50.54(a).

Appendix B to 10 CFR Part 50 establishes QA requirements for the design, construction, and operation of structures, systems, and components (SSCs) of the facility. The pertinent requirements for QA records are contained in Criterion XVII which states that "Sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records shall also include closely-related data such as qualifications of personnel, procedures, and equipment. Inspection and test records shall, as a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any

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deficiencies noted. Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location, and assigned responsibility.”

Section 50.4(b)(7)(ii) of 10 CFR states that a change to an NRC-accepted quality assurance TR from non-licensees (i.e., architect/engineers, nuclear steam supply system suppliers, fuel suppliers, constructors, etc.) must be submitted to the NRC.

The NRC accepted practices for the collection, storage, and maintenance of QA records for nuclear power plants are described in the following documents:

- American National Standards Institute (ANSI) N45.2.9-1974, “Requirements for Collection, Storage and Maintenance of Quality Assurance Records for Nuclear Power Plants,” as endorsed by Regulatory Guide 1.88, “Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records,” Revision 2 and
- ANSI/American Society of Mechanical Engineers, (ANSI/ASME) NQA-1-2008 and the NQA-1a-2009 addenda, “Quality Assurance Program Requirements for Nuclear Facilities,” as endorsed by Regulatory Guide 1.28, “Quality Assurance Program Requirements (Design and Construction),” Revision 4.

RIS 2000-018, “Guides on Managing Quality Assurance Records,” and Generic Letter 88-18, “Plant Record Storage on Optical Discs,” provide guidance for the maintenance of QA records in electronic media. RIS 2000-018 states that four NIRMA guides (TG 11-1998, TG 15-1998, TG 16-1998, and TG 21-1998) provide an acceptable basis for complying with the recordkeeping requirements of 10 CFR Part 31, Part 32, Part 34, Part 40, Appendix B to 10 CFR Part 50, Part 60, Part 70, Part 71, Part 72, or Part 76.

### 3.0 TECHNICAL EVALUATION

The NRC staff reviewed S&L’s request by comparing the difference between the newer 2011 NIRMA TGs to the 1998 NIRMA TGs. The proposed revision is a similar request to a submittal for a nuclear operating company documented in a staff safety evaluation dated May 26, 2015 (Reference 3).

In RIS 2000-018, the NRC staff determined that NIRMA TG 11-1998, “Authentication of Records and Media,” TG 15-1998, “Management of Electronic Records,” TG 16-1998, “Software Configuration Management and Quality Assurance,” and TG 21-1998, “Electronic Records Protection and Restoration,” provided acceptable methods for managing QA records in electronic media. NIRMA updated these four TGs in 2011 to reflect the best practices for managing electronic records.

The updated 2011 NIRMA TGs provide supplemental guidance for electronic records to ensure the records are identifiable and retrievable for their required retention period. The updated NIRMA TGs provide detailed guidance in the areas of records authentication, software quality assurance, and disaster recovery. These changes are based on the development and implementation of enterprise content management systems, web-based technologies, and

higher capacity LAN/WAN networks. The key difference between the 1998 and 2011 NIRMA TGs is that the updated guides provide better understanding and controls for an integrated approach to the creation, capture, and maintenance of records using electronic tools.

The change to SL-TR-1A primarily affects Section 17, for the management of electronic records and commitments to NRC RIS 2000-18 listed in the introduction chapter. The revised TR includes the following controls on quality:

- (a) No deletion or modification of records unless authorized pursuant to the regulations for record retention, and guidance in ASME NQA-1, Supplement 17S-1, Sections 2.7, 2.8, and 2.9.
- (b) Redundancy (system backup, dual storage, etc.) is met.
- (c) Legibility is required of each record.
- (d) Records media is properly maintained.
- (e) Periodic inspections to ensure no degradation of records.
- (f) Records are acceptably converted into any new system before the old system is taken out of service.

The NRC staff has reviewed the revision to SL-TR-1A, and finds that the four 2011 NIRMA TGs referenced above in Section 1.0 provide adequate guidance for electronic records, storage, and management. Based on these findings, the NRC staff concludes that there is reasonable assurance that the requirements of Criterion XVII of Appendix B continue to be met. Therefore, the NRC staff finds the proposed changes acceptable.

#### 4.0 CONCLUSION

The NRC staff evaluated TR SL-TR-1A, Revision 23, (Reference 1) and the supplemental information provided (Reference 2) and concludes that S&L's QA program continues to satisfy the QA requirements of Appendix B to 10 CFR Part 50. Specifically, the update 2011 version of the NIRMA TGs provide additional implementing details that continue to meet the quality assurance record requirements contained in Appendix B, Criterion XVII. The proposed change is acceptable.

#### 5.0 REFERENCES

1. Sargent and Lundy, LLC submittal Dated August 14, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML1527A456).
2. Sargent and Lundy, LLC to the NRC, Response to Request for Additional Information Regarding Change to Topical Report SL-TR-1A, Revision 23, Dated February 19, 2016, (ADAMS Accession No. ML16062A171).
3. SER dated May 26, 2015 related to Duke Energy Quality Assurance Topical Report (ADAMS Accession No. ML15138A347).
4. NRC Regulatory Issue Summary 2000-018, "Guidance on Managing Quality Assurance Records in Electronic Media," dated October 23, 2000.
5. NIRMA TG 11-2011, "Authentication of Records and Media"

6. NIRMA TG 15-2011, "Management of Electronic Records"
7. NIRMA TG 16-2011, "Software Quality Assurance Documentation and Records"
8. NIRMA TG 21-2011, "Required Records Protection, Disaster Recovery and Business Continuation."
9. NRC Generic Letter, 88-18, "Plant Record Storage on Optical Disks," dated October 20, 1988.

Principal Contributor: Andrea Keim, NRO/DCIP/QVIB3

Date: September 6, 2016