

December 7, 2006

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

SUBJECT: DRAFT SAFETY EVALUATION FOR SARGENT & LUNDY LLC (S&L) TOPICAL
REPORT (TR) SL-TR-1A, REVISION 18 (TAC NO. MC9605)

Dear Mr. Kurtz:

By letter dated December 30, 2005, S&L submitted SL-TR-1A, Revision 18, "Nuclear Quality Assurance Program," to the U.S. Nuclear Regulatory Commission (NRC) staff for review. Enclosed for S&L's review and comment is a copy of the NRC staff's draft safety evaluation (SE) for the TR.

Twenty working days are provided to you to comment on any factual errors or clarity concerns contained in the SE. The final SE will be issued after making any necessary changes and will be made publicly available. The NRC staff's disposition of your comments on the draft SE will be discussed in the final SE.

To facilitate the NRC staff's review of your comments, please provide a marked-up copy of the draft SE showing proposed changes and provide a summary table of the proposed changes.

If you have any questions, please contact Mr. Jon H. Thompson at (301) 415-1119.

Sincerely,

/JHopkins for/

Stacey L. Rosenberg, Chief
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Enclosure: Draft SE

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ADAMS ACCESSION NO.: ML062440491 *No major changes to SE input. NRR-106

OFFICE	PSPB/PM	PSPB/LA	Tech Branch*	PSPB/BC	DPR/DD
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DATE	12/4/06	12/1/06	11/27/06	12-5-06	12/7/06

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DRAFT SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

TOPICAL REPORT SL-TR-1A, REVISION 18

"NUCLEAR QUALITY ASSURANCE PROGRAM"

SARGENT & LUNDY LLC (S&L)

1
2 1.0 BACKGROUND
3

4 By letter dated December 30, 2005, as supplemented by letter dated September 22, 2006, S&L
5 transmitted the proposed Revision 18 to the S&L, "Nuclear Quality Assurance Program" Topical
6 Report (TR), SL-TR-1A, to the U.S. Nuclear Regulatory Commission (NRC) staff. The NRC
7 staff reviewed eight proposed changes in SL-TR-1A and identified three requests for additional
8 information (RAIs). By letter dated May 4, 2006, S&L responded to the RAIs. The regulatory
9 and technical evaluation of SL-TR-1A, Revision 18, the response to NRC RAIs, and
10 conclusions are presented below.
11

12 2.0 REGULATORY EVALUATION
13

14 The NRC staff verified that SL-TR-1A, Revision 18, complies with the following regulations,
15 regulatory guides, portions of NUREG-0800, Standard Review Plan (SRP) and industry
16 standards:
17

- 18 - Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.54(a)(1), quality
19 assurance program description
- 20 - Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants
21 and Fuel Reprocessing Plants."
- 22 - 10 CFR Part 52, "Early Site Permits; Standard Design Certifications; and Combined
23 Licenses for Nuclear Power Plants."
- 24 - Regulatory Guide (RG) 1.8, "Qualification and Training of Personnel for Nuclear Power
25 Plants," Revision 3, dated May 2000.
- 26 - RG 1.28, "Quality Assurance Program Requirements (Design and Construction),"
27 Revision 3, dated August 1985.
- 28 - NUREG-0800, SRP, Section 17.1, "Quality Assurance During the Design and
29 Construction Phases," Draft Revision 3, dated June 1996.
- 30 - NUREG-0800, SRP, Section 17.2, "Quality Assurance During the Operations Phase,"
31 Draft Revision 3, dated June 1996.
- 32 - NUREG-0800, SRP, Section 17.3, "Quality Assurance Program Description," Draft
33 Revision 1, dated June 1996.
- 34 - ANSI/ASME NQA-1, "Quality Assurance Requirements for Nuclear Facility Applications,"
35 1994 Edition.
- 36 - ANSI/ANS 3.1, "Selection, Qualification, and Training of Personnel in Nuclear Power
37 Plants," 1993 Edition.

1 3.0 TECHNICAL EVALUATION

2
3 In the December 30, 2005, and September 22, 2006, letters to the NRC staff, S&L proposed
4 eight changes to the following chapters, sections, and pages of SL-TR-1A noted below:

5
6 Proposed Change 1:

7
8 General Statement Affecting Multiple Sections and Pages of SL-TR-1A -

9
10 In the past, SL-TR-1A was established to support both the construction of new nuclear
11 power plants as well as modifications to operating plants. Over the years, and
12 particularly in Revision 10 of SL-TR-1A approved by Ms. Black (NRC) via a letter dated
13 August 28, 1995, SL-TR-1A evolved into primarily an operation based program
14 supporting both nuclear power plants as well as other types of nuclear facilities.

15
16 We now wish to restore S&L's capability to support the construction of new nuclear
17 power plants. The approach that is taken for Revision 18 is to restore the former
18 provisions of SL-TR-1A while meeting our new commitments to Regulatory Guide 1.28,
19 Revision 3, and ASME NQA-1-1994 titled "Quality Assurance Requirements for Nuclear
20 Facility Applications." These new commitments regarding Guide 1.28 and NQA-1 were
21 approved by you via a letter dated January 2, 2004. In addition, the applicable parts of
22 the latest versions (Revisions 2 dated July, 1981) of Sections 17.1 and 17.2 of the
23 Standard Review Plan (NUREG-0800) are met by Revision 18.

24
25 Staff Evaluation and RAI 1:

26
27 In RAI 1, the NRC staff determined that SL-TR-1A did not reference the requirements of
28 10 CFR Part 52 for Early Site Permits (ESPs), Standard Design Certifications (DCs), and
29 Combined Licenses (COL) applications. The TR will need to reference these requirements for
30 activities affecting future nuclear power plants under this regulation.

31
32 In the September 22, 2006, letter, S&L responded to this RAI by adding the following to
33 SL-TR-1A:

34
35 References to 10 CFR Part 52 were added to Chapters 00.00, 02.00 and 16.00.

36
37 Specific changes are as follows:

- 38
39 • references to 10 CFR 50.34(f)(3)(ii) and 10 CFR 52.47(a)(ii) were added after
40 the reference to NRC Generic Letter 83-28 and Page 00-01,
41 • references to 10 CFR 52.17(a)(i) and 10 CFR 52.18 for early site permits,
42 10 CFR 52.47(a)(i) and (ii) and 10 CFR 52.48 for standard design certifications,
43 and 10 CFR 52.79 (a) (i), (b) and (c) and 10CFR52.81 for combined licenses all
44 were added to Page 02-1,
45 • references to 10 CFR 52.78, 10 CFR 50.120 and 10 CFR 55.4 were added at the
46 bottom of Page 02-4, and
47 • reference to 10 CFR 52.37 was added to page 16-2.

1 S&L must correct the following typographical errors (10 CFR 52.17(a)(i) should be (a)(1) and
2 10 CFR 52.79(a)(i) should be (a)(1)) noted in the response above. The NRC staff determined
3 that the new references to 10 CFR Part 52 in SL-TR-1A will then be acceptable. S&L may work
4 on ESP, DC, and COL applicant activities. S&L should not work on construction activities for a
5 COL holder regulated under 10 CFR Part 52. A future revision to SL-TR-1A can add these
6 requirements when a COL is approved by the NRC staff.

7
8 Proposed Change 2:

9
10 Policy Statement and Approval Page -

11
12 Mr. Wendorf has succeeded Dr. Wattelet as Chairman and Chief Executive Officer of
13 Sargent & Lundy.

14
15 Staff Evaluation:

16
17 The NRC staff determined that this change to SL-TR-1A is consistent with 10 CFR Part 50,
18 Appendix B, Criterion I, Organization; therefore, it is acceptable.

19
20 Proposed Change 3:

21
22 Chapter 00.00 -

23
24 a. Exception is taken from the requirements in Sections 4.1 and 6.3 of
25 Supplement 2S-3 of ASME NQA-1-1994. Instead S&L may apply a 90-day grace period
26 to the requirement for a documented annual evaluation of lead auditor proficiency.
27 When the grace period is applied, the next due date for the activity is based upon the
28 original scheduled date. However, in all cases the periodicity shall not exceed one year
29 plus 90 days.

30
31 This exception, contained in the Florida Power and Light Quality Assurance Topical
32 Report, has been approved by the NRC. This exception is consistent with the applicable
33 parts of Sections 17.1 and 17.2 of NUREG-0800, particularly Sections 17.1.18.B.2,
34 17.1.18.B.3 and 17.2.18, and with Criterion XVIII of 10 CFR 50, Appendix B. Note that
35 Section 17.1.18.B.3 references Regulatory Guide 1.146 which does not contain any
36 90-day grace period. The NRC staff withdrew Regulatory Guide 1.146 on June 17,
37 1991. S&L commits to Revision 3 of Regulatory Guide 1.28 which superceded
38 Regulatory Guide 1.146 for qualification of quality assurance program audit personnel.

39
40 Staff Evaluation and RAI 2:

41
42 In RAI 2, the NRC staff requested additional information on the specific reference to the NRC
43 staff's previous approval of this exception to the audit frequency in the Florida Power & Light
44 (FP&L) Quality Assurance Topical Report. We also request additional information on whether
45 this exception is acceptable for other nuclear power plants.

46
47 In the September 22, 2006, response letter, S&L stated that:

1 This exception is contained in Florida Power & Light's Topical Quality Assurance Report
2 (TQAR) 1-76A, Appendix C dated April 1, 2004. However, this was derived from an
3 exception that the NRC granted to Rochester Gas and Electric Corporation (RG&E) via
4 letter from Guy Vissing (NRC) to Robert Mecredy (RG&E) dated July 22, 1998. The
5 NRC Safety Evaluation is attached to this letter. The exceptions granted to FP&L and
6 RG&E were to Regulatory Guide 1.146, but they are equally applicable to Section 6.3 of
7 Supplement 2S-3 of ASME NQA-1-1994. This grace period would be used by S&L on
8 FPL Group Projects (e.g. Duane Arnold, Seabrook, St. Lucie and Turkey Point) as well
9 as for other nuclear projects.

10
11 As noted in the NRC Safety Evaluation for RG&E, the NRC staff's regulatory
12 position on the required periodicity for the reevaluation of lead auditors was not
13 aimed at preventing flexibility in the scheduled performance of the reevaluations
14 but rather at providing an objective measure for ensuring suitable periodic
15 intervals for activities affecting quality.

16
17 Since the 90 day grace period proposed by S&L only allows some limited additional flexibility in
18 scheduling activities described in the subject RG, personal proficiency standards and periodicity
19 objectives remain unchanged. While the proposed grace period for RG activities described
20 above constitutes a reduction in commitments in the QA program description, such exceptions
21 continue to satisfy the provisions of Section 17.2 of the SRP. The proposed change to
22 SL-TR-1A continues to comply with NUREG-0800 and 10 CFR Part 50, Appendix B,
23 Criterion XVIII, Audits; therefore, it is acceptable.

24
25 Proposed Change 4:

26
27 Chapter 0.0 -

28
29 b. The commitment to Regulatory Guide 7.10 titled "Establishing Quality Assurance
30 Programs for Packaging Used in Transport of Radioactive Packages" is updated to
31 Revision 2. An exception is taken to Regulatory Position C.3.3 regarding the
32 independence of design verifiers. Instead, S&L follows the provisions of Regulatory
33 Guide 1.28 dated August, 1985 and the 1994 Edition of ANSI/ASME NQA-1-1994 as
34 detailed in Sections 00.00 and 03.04 of this program.

35
36 Staff Evaluation:

37
38 The NRC staff reviewed the proposed Revision 18 to SL-TR-1A and its references to controlling
39 the design and construction activities of radioactive material packaging and of independent
40 spent fuel storage installations. The NRC staff also notes that in a letter dated December 30,
41 2005, S&L acknowledges that while the TR discusses 10 CFR Parts 71 and 72, S&L is not a
42 licensee or Certificate of Compliance holder and so obtains review under these parts from the
43 appropriate client. On that basis, the NRC staff neither approves or denies the use of the S&L
44 TR, and the related exemption request to RG 7.10, for Part 71 or 72 activities that S&L
45 undertakes. However, the NRC staff notes that any Part 71 or 72 activities that S&L
46 undertakes for a client will ultimately need to conform to the client's Part 71 or 72 QA program
47 requirements and that these requirements may differ from the those stated in the TR.

1 Proposed Change 5:

2
3 Chapter 01.00 -

4 Provisions have been added to control soil borings, laboratory testing and hydrology
5 assessments performed by consultants or subcontractors of S&L early in the
6 construction of a new facility.

7
8 These provisions are consistent with the applicable parts of Sections 17.1 and 17.2 of
9 NUREG-0800, particularly Sections 17.1.2.C.2 and 17.2.C, and with Criterion II of
10 10 CFR 50, Appendix B with the clarification that these services may be commercial
11 grade dedicated in accordance with 10 CFR 21.

12
13 Staff Evaluation:

14
15 The NRC staff determined that this change to SL-TR-1A, combined with added references to
16 10 CFR Part 52 regulations discussed earlier in Proposed Change 1, is consistent with
17 NUREG-0800 and 10 CFR Part 50, Appendix B, Criterion II, Quality Assurance Program;
18 therefore, it is acceptable.

19
20 Proposed Change 6:

21
22 Section 03.04 -

23 A requirement has been added to perform broad system and structure design reviews
24 prior to initial fuel loading.

25
26 This requirement is consistent with Section 17.1.3.E.4.c of NUREG-0800 and with
27 Criterion III of 10 CFR 50, Appendix B.

28
29
30 Staff Evaluation:

31
32 The NRC staff determined that this change to SL-TR-1A is consistent with NUREG-0800 and
33 10 CFR Part 50, Appendix B, Criterion III, Design Control; therefore, it is acceptable. However,
34 as indicated in Proposed Change 1, S&L may work on ESP, DC, and COL applicant activities.
35 S&L should not work on construction activities for a COL holder regulated under 10 CFR
36 Part 52.

37
38 Proposed Change 7:

39
40 Section 11.05 -

41 A new section is added concerning pre-operational/startup test procedures. Engineers
42 and testers are qualified in accordance with either ANSI/ANS-3.1-1987 or
43 Supplement 2S-1 and Appendix 2A-1 of ANSI/ASME NQA-1, as appropriate (see
44 Pages 00-3 and 00-4 of SL-TR-1A).

45
46

1 This is consistent with Sections 17.1.11.A.1 of NUREG-0800 and with Criterion XI of
2 10 CFR 50, Appendix B.

3
4 Staff Evaluation and RAI 3:

5
6 In RAI 3, the NRC staff determined that SL-TR-1A should reference NRC RG 1.68, "Initial Test
7 Programs," Revision 2, dated August 1978 and RG 1.8, "Qualification and Training of
8 Personnel for Nuclear Power Plants," Revision 3, dated May 2000, which endorses
9 ANSI/ANS 3.1-1993, "Selection, Qualification, and Training of Personnel in Nuclear Power
10 Plants." RG 1.8 and ANSI/ANS 3.1-1993 should also be referenced in place of ANSI/ANS 3.1-
11 1987. RG 1.68 contains preoperational and startup test procedures for safety related and
12 important to safety systems that are subject to quality assurance requirements. RG 1.8 and
13 ANSI/ANS 3.1-1993 contain current training qualification requirements for QA and quality
14 control personnel who review, revise, and approve pre-operational and startup test procedures
15 in nuclear power plants.

16
17 In the September 22, 2006, letter, S&L stated the following in response to this RAI:

18
19 S&L agrees that commitments to Revision 3 of RG 1.8 and ANSI/ANS 3.1-1993
20 with exceptions should be added to SL-TR-1A.

21
22 Commitments to Revision 3 of RG 1.8 and ANSI/ANS 3.1-1993 were added to
23 Pages 00-3 (in lieu of ANSI/ANS 3.1-1987 and -1978), 11-1 and 11-3.

24
25 The exceptions that S&L proposes to take to RG 1.8 and ANSI/ANS 3.1 are:

- 26
- 27 • S&L commits to Part 1 and Appendix 2A-1 of the 1994 Edition of
28 ANSI/ASME NQA-1 in lieu of the 1983 Edition, and
 - 29 • Alternatives to the education and experience requirements, such as experience
30 other than at a nuclear-fuel electric power production plant, shall be evaluated
31 and documented by the Chief Executive Officer for the Quality Assurance
32 Manager, by the Quality Assurance Manager for an individual providing quality
33 assurance supervision and other members of the Quality Assurance Division,
34 and by the responsible manager for other personnel in lieu of the applicable plant
35 manager.
- 36

37
38 Regarding Revision 2 of RG 1.68, Initial Test Programs, S&L suggests that the
39 appropriate place for a licensee to take a position on RG 1.68 is in the SAR, Chapter 14,
40 "Initial Plant Test Program." S&L will then follow whatever position the applicable client
41 takes on this guide. This is consistent with Sections 14.2, VI of 17.1 and 17.2 (and
42 also II.U and VI of draft 17.5) of NUREG-0800. Thus, we believe that a reference to
43 RG 1.68 is neither desirable or necessary.

44
45 The NRC staff finds that this exception to RG 1.8 is acceptable because it still meets the
46 requirements in 10 CFR Part 50, Appendix B, Criterion II, Quality Assurance Program.

1 The NRC staff agrees with S&L that RG 1.68 would be found in any future COL Safety Analysis
2 Report Chapter 14 and that S&L would follow the applicable position of the COL client; thus,
3 S&L does not need to add RG 1.68 to SL-TR-1A.
4

5 The NRC staff also finds that the new Section 11.05 in SL-TR-1A is consistent with
6 NUREG-0800 and 10 CFR Part 50, Appendix B, Criterion XI, Test Control; therefore, it is
7 acceptable.
8

9 Proposed Change 8:

10 Section 16.01 -

11
12
13 A sentence has been added that states: "Management, at all levels, is to foster a 'no-
14 fault' attitude toward the identification of conditions adverse to quality." While this was
15 the expectation of upper management, it has been decided to explicitly state it.
16

17 While this Topical Report is based on Sections 17.1 and 17.2 of the Standard Review
18 Plan, this expectation is contained in Section 17.3.A.6.a of the Standard Review Plan. It
19 is consistent with Criterion XVI of 10 CFR 50, Appendix B and with NRC Regulatory
20 Issue Summary 2005-20 titled "Revision to Guidance Contained in NRC Generic
21 Letter 91-18, 'Information to Licensees Regarding Two NRC Inspection Manual Sections
22 on Resolution of Degraded and nonconforming Conditions and on Operability'."
23

24 Staff Evaluation:

25
26 The NRC staff determined that adding a "no fault" attitude toward identifying conditions adverse
27 to quality to SL-TR-1A is consistent with NUREG-0800 and 10 CFR Part 50, Appendix B,
28 Criterion XVI, Corrective Action; therefore, it is acceptable.
29

30 4.0 CONCLUSION

31
32 The NRC staff finds that the S&L proposed changes in SL-TR-1A, Revision 18, are consistent
33 with the requirements in 10 CFR 50.54(a), 10 CFR Part 50, Appendix B, and
34 10 CFR Part 52 and S&L previous commitments to NUREG-0800, regulatory guides, and
35 industry standards related to quality assurance. Therefore, the NRC staff finds that the
36 proposed changes in SL-TR-1A, Revision 18, are acceptable.
37

38 5.0 REFERENCES

- 39
40 1. S&L, "Nuclear Quality Assurance Program," Topical Report SL-TR-1A, Revision 18,
41 dated December 30, 2005, ADAMS Accession No. ML060090385
42
43 2. S&L Response to NRC Staff Requests for Additional Information related to SL-TR-1A,
44 Revision 18, dated September 22, 2006, ADAMS Accession No. ML062690233
45

- 1 3. NRC Staff Letter from Guy Vissing to Dr. Robert C. Mecredy, NRC Safety Evaluation to
- 2 RG&E, dated July 22, 1998, ADAMS Accession No. ML062680254
- 3
- 4 Principal Contributor: Frank X. Talbot
- 5
- 6 Date: December 7, 2006