

SAFETY EVALUATION OF THE ENTERGY VERMONT YANKEE QUALITY ASSURANCE
PROGRAM MANUAL, REVISION 4
DOCKET NOS. 50-271 AND 72-59

1.0 INTRODUCTION

By letter dated February 4, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16035A506), Entergy Nuclear Operations, Inc. (Entergy) submitted for the U.S. Nuclear Regulatory Commission (NRC) staff's review, a revision to the Vermont Yankee Quality Assurance Program Manual (QAPM), in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) section 50.54(a)(4).

The QAPM provides a top-level overview of the quality program controls applied to quality related items and activities at the Vermont Yankee Nuclear Power Plant during the decommissioning phase of the plant life. The QAPM is based on the applicable portions of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," 10 CFR Part 72, "Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor Related Greater than Class C Waste," Subpart G, "Quality Assurance," and 10 CFR Part 71, "Packaging and Transportation of Radioactive Material," Subpart H, "Quality Assurance."

2.0 REGULATORY BASIS

The Commission's regulatory requirements related to Quality Assurance (QA) programs are set forth in Appendix B to 10 CFR Part 50 (Appendix B), 10 CFR 50.34(b)(6)(ii), and 10 CFR 50.54(a). In addition, the Commission's regulatory requirements related to QA programs for the independent storage of spent nuclear fuel and packaging and transportation of radioactive material are addressed in 10 CFR Part 71, Subpart H, and 10 CFR Part 72, Subpart G.

Appendix B establishes the requirements for the design, fabrication, construction, and testing of structures, systems, and components (SSCs) for the facility. The pertinent requirements of Appendix B 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.

The regulations in 10 CFR 50.34, "Content of applications; technical information," require that every applicant for an operating license include information in its Final Safety Analysis Report on the managerial and administrative controls to be used to ensure safe operation. The information on the controls shall also include a discussion on how the applicable requirements of Appendix B will be satisfied.

The regulations in 10 CFR 50.54 require each power plant subject to the requirements of Appendix B to implement a QA program and 10 CFR 50.54(a)(4) require licensees to submit to the NRC, changes to their QA Program that reduce commitments.

The regulations in 10 CFR Part 71, Subpart H, establishes the quality assurance requirements applying to design, purchase, fabrication, handling, shipping, storing, cleaning, assembly, inspection, testing, operation, maintenance, repair, and modification of components of packaging that are important to safety.

The regulations in 10 CFR Part 72, Subpart G, establishes the quality assurance requirements that apply to design, purchase, fabrication, handling, shipping, storing, cleaning, assembly, inspection, testing, operation, maintenance, repair, modification of SSCs, and decommissioning that are important to safety.

3.0 EVALUATION

The request for review and approval of the Vermont Yankee QAPM, considered a reduction in commitment, was submitted by the February 4, 2016, letter, in accordance with the provisions of 10 CFR 50.54(a)(4). The letter included Revision 4 to the QAPM (provided in Enclosure 2 thereto).

In evaluating the adequacy of the revisions to the QAPM, the NRC staff used the guidance contained in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 17.3, "Quality Assurance Program Description," dated August 1990 (ADAMS Accession No. ML052350376), hereafter referred to as Section 17.3, which provides acceptance criteria for quality assurance program descriptions.

The changes made to the QAPM Revision 4 include the following:

- a. Changes to the policy statement and QAPM involving limiting the application of the QAPM to safety related and important to safety SSCs. In the proposed change, the QAPM is only applicable to safety related SSCs, important to safety SSCs controlled by 10 CFR 72 and transportation packages controlled by 10 CFR 71. The applicability to other items and activities will be determined on a case-by-case basis and controlled by approved procedures. Limiting the application of the QAPM to safety related and important to safety SSCs is adequate after cessation of power operations. The staff determined these changes continue to meet the guidance of NUREG-0800, Section 17.3, and, therefore, meet the requirements of Appendix B.
- b. Changes involving removing the need for maintaining NRC Licensed Operators as part of the site organization. Upon the certification of the end of reactor operations, the 10 CFR Part 50 license no longer authorizes operation of the reactor or placement or retention of fuel into the reactor vessel. 10 CFR 50.54(m) is not applicable to a facility that has permanently ceased operations; therefore there are no longer requirements to maintain NRC Licensed Operators at a decommissioning facility. The staff determined

the change regarding NRC Licensed Operators is not considered to be a reduction in commitment.

- c. Changes made in response to the Request for Additional Information (RAI) (ADAMS Accession No. ML16090A029) issued on April 5, 2016, included in Entergy's response letter (ADAMS Accession ML16126A579) dated May 5, 2016. The RAI requested clarification on the Certified Fuel Handler Training Program under which non-licensed operators will be qualified. In response, Entergy included a statement in Revision 4 of the QAPM that stated Certified Fuel Handlers shall be qualified in accordance with Vermont Yankee Nuclear Power Station's (VYPS's) technical specification. The VYPS technical specification references an NRC approved training and retraining program for Certified Fuel Handlers, in accordance with 10 CFR 50.2. The proposed changes, upon implementation, will ensure that personnel achieve and maintain suitable proficiency through established training programs. The staff determined these changes continue to meet the guidance of NUREG-0800, Section 17.3, and, therefore, meet the requirements of Appendix B.
- d. Changes involving adding an exception to American National Standards Institute (ANSI) and American Nuclear Society (ANS) 3.1-1978 to allow nuclear power plant experience to include experience acquired at a defueled reactor site, directly related to the storage or handling of spent fuel in a spent fuel pool. The QAPM also states individuals will obtain the necessary onsite experience to fill the position of Certified Fuel Handlers or operators, based on assigned functions and validation of equivalent training and experience rather than requiring at least 6 months of nuclear power plant experience to be attained at Vermont Yankee. The proposed exemption to ANSI/ANS 3.1-1978, when implemented, ensures personnel performing activities affecting quality achieve and maintain suitable proficiency. The staff determined these changes continue to meet the guidance of NUREG-0800, Section 17.3, and, therefore, meet the requirements of Appendix B.
- e. Changes involving transitioning the onsite-review function to an independent review function and modifying the function of the off-site safety review to reflect the complexity of operations for a decommissioning facility. The proposed changes to the QAPM include a description of the independent safety review and safety review committee organizational structure, functional responsibilities, level of authorities and interfaces. The proposed organizational changes provide sufficient authority and organizational freedom. The staff determined these changes continue to meet the guidance of NUREG-0800, Section 17.3, and, therefore, meet the requirements of Appendix B.

4.0 CONCLUSION

The NRC staff used the acceptance criteria of SRP Section 17.3 as the basis for evaluating the acceptability of the changes to the Entergy Vermont Yankee QAPM in conformance with the applicable portions of Appendix B to 10 CFR Part 50. The program description adequately describes the provisions to meet the requirements of Appendix B. The NRC staff concludes that the proposed Vermont Yankee QAPM Revision 4 follows the NRC guidance contained within,

and conforms to the format of NUREG-0800, Section 17.3, complies with Appendix B to 10 CFR Part 50 requirements for the QA program and is, therefore, acceptable.

5.0 REFERENCES

1. NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Section 17.3, "Quality Assurance Program Description" dated August 1990 (ADAMS Accession No. ML052350376)
2. RG 1.28, "Quality Assurance Program Requirements (Design and Construction)" Revision 4, dated June 2010 (ADAMS Accession No. ML100160003)
3. Perito, Michael, Entergy Nuclear Operations, Inc. letter to the U.S. Nuclear Regulatory Commission, "Entergy Vermont Yankee Quality Assurance Program Manual Yankee Nuclear Power Station Docket 50-271, License No. DPR -28, Docket No. 72-59," dated February 4, 2016 (ADAMS Accession No. ML16035A506)
4. Parrott, Jack D., U.S. Nuclear Regulatory Commission, letter to Mr. Michael Perito, Entergy Nuclear Operations, Inc., "Request for Additional Information Related to Proposed Changes to Quality Assurance Program Manual, Vermont Yankee Nuclear Power Station (CAC No. L53120)," dated April 5, 2016 (ADAMS Accession No, ML16090A029)
5. Perito, Michael, Entergy Nuclear Operations, Inc. letter to the U.S. Nuclear Regulatory Commission, "Response to Request for Additional Information Pertaining to a Change to Entergy Vermont Yankee Quality Assurance Program Manual (VY QAPM)," dated May 5, 2016 (ADAMS Accession No. ML16126A579)
6. American National Standards Institute (ANSI) and American Nuclear Society (ANS), ANSI/ANS 3.1, "Selection and Training of Nuclear Power Plant Personnel," La Grange Park, IL, 1978.