

# APPENDIX

(August 2000)

## QUALITY ASSURANCE FOR AGING MANAGEMENT PROGRAMS



## Quality Assurance for Aging Management Programs

The license renewal applicant is required to demonstrate that the effects of aging on structures and components subject to an aging management review (AMR) will be adequately managed to assure that their intended functions will be maintained consistent with the current licensing basis (CLB) of the facility for the period of extended operation. Therefore, those aspects of the AMR process that affect quality of safety-related structures, systems, and components, are subject to the quality assurance (QA) requirements of Appendix B to 10 CFR Part 50. For nonsafety-related structures and components subject to an AMR, the existing 10 CFR Part 50, Appendix B QA program may be used by the applicant to address the elements of corrective actions, confirmation process, and administrative controls on the following bases:

- Criterion XVI of 10 CFR Part 50, Appendix B, requires that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, measures must be implemented to assure that the cause of the nonconformance is determined and that corrective action is taken to preclude repetition. In addition, the root-cause of the significant condition adverse to quality, and the corrective action implemented must be documented and reported to appropriate levels of management.
- Since Criterion XVI of 10 CFR Part 50, Appendix B, requires that measures be taken to preclude repetition of significant conditions adverse to quality, follow-up actions must be taken to verify effective implementation of the proposed corrective action. This verification of corrective action implementation comprises the confirmation process element for aging management programs for license renewal. For example, in managing internal corrosion of piping, a mitigation program (water chemistry) may be used to minimize susceptibility to corrosion. However, it may also be necessary to have a condition monitoring program (ultrasonic inspection) to verify that corrosion is indeed insignificant. When corrective actions are necessary for significant conditions, there should be follow-up activities to confirm that the corrective actions implemented are effective in preventing recurrence.
- Administrative controls are the provisions associated with organization and management, policies, orders, instructions, procedures, record keeping, and designations of authority and responsibility, that are necessary to assure operation of the facility in a safe manner. 10 CFR 50.34(b)(6)(ii) and 10 CFR 50.36(c)(5) require that nuclear power plant license applicants include in the final safety analysis report information on the managerial and administrative controls to be used to assure safe operation. 10 CFR 50.34(b)(6)(ii) and 10 CFR 50.36(c)(5) also stipulate that Appendix B to 10 CFR Part 50 sets forth the requirements for these managerial and administrative controls. Accordingly, 10 CFR Part 50, Appendix B, also satisfies the administrative controls element necessary for aging management programs for license renewal.

Notwithstanding the suitability of its provisions to address quality-related aspects of the AMR process for license renewal, 10 CFR Part 50, Appendix B, covers only safety-related structures, systems, and components. Therefore, absent a commitment by the license renewal applicant to expand the scope of its 10 CFR Part 50, Appendix B, QA program to include nonsafety-related structures and components subject to an AMR for license renewal, the aging management programs applicable to such structures and components would have to provide alternative means to address corrective actions, confirmation process, and administrative controls. Such alternate means would be subject to review by the staff on a case-by-case basis.

