

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
OFFICE OF NEW REACTORS  
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS  
WASHINGTON, DC 20555-0001

Month XX, Year

**NRC DRAFT REGULATORY ISSUE SUMMARY YYYY-####: DISPOSITION OF INFORMATION RELATED TO THE TIME PERIOD THAT SAFETY-RELATED STRUCTURES, SYSTEMS OR COMPONENTS ARE INSTALLED**

**ADDRESSEES**

All holders of and applicants for an operating license or construction permit for a nuclear power reactor under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities."

All holders of and applicants for a power reactor early site permit, combined license, standard design approval, or manufacturing license under 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants." All applicants for a standard design certification, including such applicants after initial issuance of a design certification rule.

**INTENT**

The U.S. Nuclear Regulatory Commission (NRC) is issuing this regulatory issue summary (RIS) to reiterate existing requirements related to dispositioning information pertaining to the capability of safety-related structures, systems and components (SSCs) to perform their safety-related functions in nuclear power plants. This RIS addresses instances where: {(1) a licensee becomes aware of credible information<sup>1</sup> pertaining to the time period that a safety-related SSC is installed that may negatively impact its ability to perform its safety-related function(s); and (2) a safety-related SSC has been installed for longer than the amount of time described in the plant's current licensing basis (CLB) and/or design basis documentation.}<sup>2</sup>

In addition, this RIS reinforces the obligations of nuclear power plant licensees to maintain safety-related SSCs in accordance with Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," the licensee-specific, NRC-approved quality assurance (QA) program, and the licensee's site-specific operability/functionality determination process. This RIS requires no specific action or written response on the part of an addressee.

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<sup>1</sup> Examples of credible information include but are not limited to vendor bulletins, generic communications, and industry operating experience

<sup>2</sup> The NRC is seeking feedback on this specific language

## BACKGROUND INFORMATION

Safety-related SSCs installed in a commercial nuclear power plant must conform to the requirements of the licensee's NRC-approved QA program. Appendix B to 10 CFR Part 50 establishes QA requirements for the design, manufacture, construction, and operation of safety-related SSCs. Appendix B to 10 CFR Part 50 applies to activities affecting the safety-related functions of SSCs, including designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, and modifying.

In NUREG-0737, "Clarification of TMI [Three Mile Island] Action Plan Requirements," the NRC staff states that TMI Task Action Plan I.C.5, Procedures for Feedback of Operating Experience to Plant Staff (NUREG-0660) requires "all involved in the assessment of operating experience to review information from a variety of sources." Licensees must also prioritize such information based on its safety significance.<sup>3</sup> Further, as a result of NRC Generic Letter (GL) 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events,"<sup>4</sup> and GL 90-03, "Relaxation of Staff Position in Generic Letter 83-28, Item 2.2, Part 2, 'Vendor Interface of Safety Related Components',"<sup>5</sup> licensees established programs to ensure that vendor information for safety-related SSCs is complete. These programs were established, in part, to ensure that vendor information is properly evaluated for its effect on safety-related equipment.

Additionally, licensees must consider operability of SSCs in accordance with the plant's technical specifications. When a licensee either becomes aware that a safety-related SSC has been installed for longer than the amount of time described in the CLB and/or design basis documentation, or becomes aware of credible information that challenges the presumption that a safety-related SSC can continue to perform its safety function(s), the licensee must address and document this potential non-conforming condition in accordance with its NRC-approved QA program, operability/functionality determination process, and corrective action program.

NRC Inspection Manual Chapter (IMC) 0326, "Operability Determinations and Functionality Assessments for Conditions Adverse to Quality or Safety,"<sup>6</sup> defines a nonconforming condition as "a condition of an SSC that involves a failure to meet the CLB or a situation in which quality has been reduced because of factors such as improper design, testing, construction, or modification." IMC 0326 also describes an acceptable process for a nuclear power plant licensee to make operability/functionality determinations.

Through ongoing inspection and operating experience reviews, the NRC staff identified instances in which licensees did not incorporate relevant operating experience (e.g., vendor information) into plant procedures and programs. The NRC issued Information Notice (IN) 2012-06, "Ineffective Use of Vendor Recommendations,"<sup>7</sup> to inform addressees of operating experience regarding ineffective use of vendor recommendations at U.S. nuclear power plants. One of the events discussed in the IN was determined to be risk significant, resulting in a White inspection finding. This event involved a dual-unit trip and a subsequent emergency diesel generator (EDG) failure to start. The EDG failure was attributed to a time delay relay that had

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<sup>3</sup> Available in Agencywide Documents Access and Management System (ADAMS) at Accession No. ML051400209

<sup>4</sup> Available in ADAMS at Accession No. ML031210064

<sup>5</sup> Available in ADAMS at Accession No. ML031140578

<sup>6</sup> Available in ADAMS at Accession No. ML13274A578

<sup>7</sup> Available in ADAMS at Accession No. ML112300706.

been in service longer than the vendor documentation recommended. This condition had not been adequately evaluated or addressed by the licensee.

The NRC staff reviewed several years of operating experience related to the performance of SSCs at nuclear power plants. In its review and analyses, the NRC staff noted an increase in the number of inspection findings and licensee event reports (LERs) involving non-conformances with the provisions of Appendix B to 10 CFR Part 50 and failures of safety-related components that had been installed in the plant for longer than the amount of time in the plant's CLB; design basis documentation; or vendor documents. The staff also noted multiple instances where no corresponding technical evaluation of the condition had been completed. These and other observations are documented in, "IOEB [NRC's Operating Experience Branch] Analysis Team Study on Component Aging-Insights from Inspection Findings and Reportable Events."<sup>8</sup>

There are several requirements to assure that safety-related SSCs will perform their specified safety-related function(s), including, but not limited to:

- 10 CFR 50.34, "Contents of applications; technical information," 10 CFR 52.79, "Contents of applications; technical information in final safety analysis report," and 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants."
- 10 CFR 50.36, "Technical Specifications."
- 10 CFR 50.65; "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." An acceptable approach for complying with the maintenance rule is described in NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,"<sup>9</sup> which was endorsed through NRC Regulatory Guide (RG) 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants."<sup>10</sup>
- Updated Final Safety Analysis Report discussions of conformance with 10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," specifically General Design Criterion (GDC) 1, "Quality Standards and Records," and GDC 4, "Environmental and Dynamic Effects Design Bases."
- 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety."
- Applicable codes and standards that specify construction, inservice inspection, and inservice testing (IST) requirements, incorporated by reference in 10 CFR 50.55a, "Codes and Standards," with conditions.
- 10 CFR Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants," for those plants that have entered the period of extended operation.

## SUMMARY OF ISSUE

{If an SSC has been installed in a nuclear power plant for longer than the amount of time described by the plant's CLB and/or design basis documentation, the licensee must ensure that the SSC can continue to be relied upon to perform its intended safety-related function(s). The licensee should make these determinations prior to exceeding this documented time period.

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<sup>8</sup> Available in ADAMS at Accession No. ML13044A469.

<sup>9</sup> Available in ADAMS at Accession No. ML11116A198.

<sup>10</sup> Available in ADAMS at Accession No. ML113610098

Additionally, when a licensee becomes aware of credible information that may negatively impact the ability of a safety-related SSC to continue to perform its safety-related function(s), there are NRC requirements, some of which are listed above, which direct the licensee to evaluate this information to ensure that the SSC can continue to perform its safety-related function(s).<sup>11</sup>

These licensee determinations must be documented in accordance with the licensee's NRC-approved QA program, operability/functionality process, and corrective action program. These programs are collectively established to ensure that: (a) a technically defensible determination is made regarding the continued ability of the SSC to perform its specified function (i.e., operability/functionality); (b) corrective actions, if required, are established to restore full qualification with the CLB or to modify the CLB; and (c) any corrective actions are completed in a time-frame commensurate with their safety significance.

It is important to note that, while compliance with the provisions of 10 CFR 50.65 (i.e., the "maintenance rule") is required, this regulation in and of itself does not relieve licensees of the need to comply with other applicable regulations, NRC-approved program requirements, and commitments. The maintenance rule is performance-based and as a result does not require corrective action until the performance or condition of an SSC does not meet licensee established goals.

In summary, licensees must evaluate situations where a safety-related SSC is installed in a nuclear power plant for longer than the amount of time described by the plant's CLB and/or design basis documentation. Licensees must also evaluate credible information that may negatively impact the ability of a safety-related SSC to perform its safety function(s) regardless of whether this level of information is described in the plant's CLB and/or design basis documentation. These instances must be addressed in accordance with the licensee's NRC-approved QA program, operability/functionality determination process, and corrective action program.

## **BACKFITTING AND ISSUE FINALITY DISCUSSION**

[Discussion will be provided in draft RIS]

## **FEDERAL REGISTER NOTIFICATION**

[Discussion will be provided in final RIS]

## **CONGRESSIONAL REVIEW ACT**

[Discussion will be provided in final RIS]

## **PAPERWORK REDUCTION ACT STATEMENT**

This RIS does not contain new or amended information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing requirements were approved by the Office of Management and Budget (OMB), approval number 3150-0011 and 3150-0151. **[OIS will revise this sentence as appropriate.]**

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<sup>11</sup> The NRC is seeking feedback on this specific language

## Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

### CONTACT

Please direct any questions about this matter to the technical contacts listed below.

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Note: NRC generic communications may be found on the NRC public Web site, <http://www.nrc.gov>, under NRC Library/Document Collections.

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