

SLR Document Changes: Fire Water Test in Lieu of Periodic Inspections

Overview of purpose of change: Revise AMP XI.M42, "Internal Coatings/Linings for In-Scope Piping, Piping Components, Heat Exchangers, and Tanks," to recommend opportunistic inspections, in lieu of periodic inspections, as an acceptable alternative for buried internally coated/lined fire water system piping provided: (a) flow tests and internal piping inspections will occur at intervals specified in NFPA 25, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," or as modified by AMP XI.M27, "Fire Water System," Table XI.M27-1, "Fire Water System Inspection and Testing Recommendations"; (b) through-wall flaws in the piping can be detected through continuous system pressure monitoring; and (c) plant-specific operating experience (OE) is acceptable (i.e., no leaks due to age-related degradation).

Basis Document Input: Revise NUREG-2221 to add a new row to Table 2-29 as follows:

XI.M42 Internal Coatings/Linings for In-Scope Piping, Piping Components, Heat Exchangers, and Tanks		
Location of Change	Summary of Significant Changes	Technical Bases for Changes
<u>Detection of Aging Effects</u>	<u>Revise AMP XI.M42, "Internal Coatings/Linings for In-Scope Piping, Piping Components, Heat Exchangers, and Tanks," to recommend opportunistic inspections, in lieu of periodic inspections, as an acceptable alternative for buried internally coated/lined fire water system piping provided specific conditions are met.</u>	<u>The staff has accepted opportunistic inspections, in lieu of periodic inspections, as an acceptable alternative for buried internally coated/lined fire water system piping provided: (a) flow tests and internal piping inspections will occur at intervals specified in NFPA 25, or as modified by AMP XI.M27, Table XI.M27-1; and (b) through-wall flaws in the piping can be detected through continuous system pressure monitoring. Examples of the staff's acceptance of this alternative approach are documented in the Safety Evaluation Report Related to the License Renewal of Fermi 2 Nuclear Power Plant (ADAMS Accession No. ML16190A241) and the Safety Evaluation Report Related to the Subsequent License Renewal of Peach Bottom Atomic Power Station, Units 2 and 3 (ADAMS Accession No. ML19317E013).</u> <u>Based on recent OE involving ruptures of buried fire water system piping due to age-related degradation (ADAMS Accession No. ML19294A044), the staff added a third condition for using this alternative approach related to plant-specific operating experience.</u>

Document Changes:

SRP-SLR

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None

GALL-SLR

Add the following paragraph to the end of the “detection of aging effects” program element:

Opportunistic inspections, in lieu of periodic inspections, are an acceptable alternative for buried internally lined/coated fire water system piping provided the following are met: (a) flow tests and internal piping inspections will occur at intervals specified in NFPA 25, or as modified by AMP XI.M27, Table XI.M27-1; (b) through-wall flaws in the piping can be detected through continuous system pressure monitoring; and (c) plant-specific OE is acceptable (i.e., no leaks due to age-related degradation). If exceptions are stated to Table XI.M27-1 related to flow tests or internal piping inspections, the exception should justify why the exceptions will not impact detecting potential internal loss of coating/lining integrity.