BPITF:
Buried and Underground Components License Renewal and GALL Update

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Agenda

- Internal surface inspections of buried and underground piping (LR-ISG-2012-02).
- Subsequent License Renewal Considerations for AMP XI.M41, Buried and Underground Piping and Tanks

Two ISGs for Buried Piping Inspections

- LR-ISG-2011-03 was issued on Aug. 2, 2012 and revised AMP XI.M41 to included additional aging management considerations for the exterior surfaces of buried and underground piping and tanks.
- LR-ISG-2012-02 was issued on Nov. 22, 2013 and revised several AMPs to include aging management considerations for the interior surfaces of buried and underground piping and tanks.

Buried and Underground Pipe Internal Inspections

- XI.M38, Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components: Inspections can be based on results from interior surfaces of accessible piping with similar material and environment.
- XI.M27, Fire Water System: Extrapolation of inspections for above ground components with similar material and environment to buried and underground components is allowed.

Recurring Internal Corrosion (RIC)

- RIC is identified by both the number of occurrences of internal aging effects with the same aging mechanism and the extent of degradation at each localized site:
  - Occurrences: one per refueling outage cycle that has occurred over three or more sequential or nonsequential cycles for a 10-year OE search, or two or more sequential or nonsequential cycles for a 5-year OE search
  - Extent of degradation: aging effect resulted in the component not meeting either plant-specific acceptance criteria or experiencing a reduction in wall thickness of greater than 50 percent (regardless of the minimum wall thickness)

Buried and Underground Pipe Internal Inspections

- Applies to AMPs XI.M38, XI.M27 as well as XI.M20 (Open-Cycle Cooling Water System) and XI.M21A (Closed Treated Water System)
- Inspections for loss of material due to RIC requires a determination of how inspection for components that are not easily accessed (i.e. buried, underground) will be conducted and how leaks in any involved buried and underground components will be identified.

Other LR-ISG-2012-02 Considerations

- XI.M29, Aboveground Metallic Tanks, allows crediting of cathodic protection preventive measures consistent with AMP XI.M41 and performance of a one-time inspection for tanks founded on soil.

Subsequent License Renewal (SLR)

- XI.M41 is classified as a Category 2 program for SLR (EPRI Report 3002000576)
  - No technical data needs relative to projecting operating conditions to 80 years
  - On-going program and/or relevant operating experience used for continuous improvement

SLR Continued

- Changes recommended for GALL Rev 3
  - Table 4c footnote 3 (buried tanks) clarification for cathodic protection
  - Use of ISO 15589-1 to determine cathodic potential values based on soil resistivity
  - Clarify 1200mV cathodic protection limit

Conclusions

- LR-ISG-2012-02 may require access to buried and underground piping for aging management of internal surfaces.
- On-going program and/or relevant operating experience is recommended for continuous improvement of AMP M41.