

efficiency bulletin

March 23, 2017

Efficiency Bulletin: 17-07

Implement a Screening Process for Changes to NEI 03-08 Material Initiative Topical Reports Without Requiring NRC Approval

This efficiency bulletin provides a screening process, similar to 10 CFR 50.59 for use by the issue program (IP) under the NEI 03-08, Guideline for the Management of Materials Issues, for determining if new or revised material aging topical reports can be generically released for implementation by member utilities without prior NRC approval.

Addressees: Chief nuclear officers, NEI APCs and INPO APCs

Issue: **ENG-007: Implement a screening process for changes to NEI 03-08 Material Initiative Topical Reports without requiring NRC approval**

Summary of Efficiency Opportunity

- Desired end-state—The screening process developed under this initiative is being effectively used and low-risk revisions to materials issue programs topical reports issued under NEI 03-08 are promptly implemented.
- Value proposition (vision of excellence)—Implementation of a screening process to determine the need for NRC review of topical reports issued under NEI 03-08 will expedite implementation of revised industry guidance documents. Safety and reliability will be enhanced, because resources will be focused on aging management issues and program elements having significant safety importance.

Color Code: GREEN

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- Why is it important?—Industry experience reveals that many current inspection requirements are overly conservative—in many cases requiring repeated inspections and analyses of small flaws that do not change over operating cycles. Additionally, the process for seeking NRC approval for inspection relief is inefficient and takes considerable time, resulting in lost opportunity for implementing new guidance. This screening method ensures that requests for NRC review and approval will focus on aging management issues and program elements that have significant safety importance allowing industry the flexibility to make appropriate and timely modifications to existing aging management guidance.
- Industry benchmark value(s)—Minimize number of NRC review submittals and selected reduction in inspection scope/hours.
- Measure of effectiveness—
 - Outage costs and collective dose for inspections prescribed by the IPs is reduced without compromise to safety and reliability.
 - Continued use of IP metrics as defined in NEI 03-08 to monitor program effectiveness.
 - No regulatory violations associated with IP topical report implementation.
 - No unexpected materials degradation.

Background

- As a means of ensuring continued safe operation of reactor plants, NRC and industry have often agreed to use the topical report submittal and approval process to address materials degradation issues in lieu of regulatory action. This process was initially an efficient method for implementing new aging management guidance to address significant emerging materials issues faced by industry. However, as industry continues to progress the overall state of knowledge regarding materials degradation issues relevant to light water reactor operation, there is an increasing need to revise or replace prior guidance, some of which has received prior NRC approval via a safety evaluation (SE). Under current practice, the industry does not implement less conservative revised or replacement guidance without prior NRC review and approval.
- In many cases, such revisions are minor, are based directly on precedent established by NRC review and approval of analogous guidance, or represent program improvements based on observed degradation trends. In these cases, the review and approval process is an inefficient use of resources for reviewing changes to guidance having limited or no potential for a significant adverse impact on the capability of the aging management guidance to ensure continued safe operation.
- Implementation of the proposed screening process would be similar to the 10 CFR 50.59 review process. This new screening process would assist NRC in its efforts to focus resources on aging management issues and program elements having significant safety importance while simultaneously allowing industry the flexibility to make appropriate and timely modifications to existing aging management guidance. For example, using this screening process, a recent revision of inspection guidance—that made inspection more efficient without affecting safety—could have been implemented without waiting for NRC approval.

Key to Color Codes:

Red: NSIAC initiative – full participation required for viability

Blue: Action expected at all sites, but is not needed for broad industry viability

Green: Utility discretion to implement, consistent with its business environment

- NRC technical staff and management were briefed on the screening process. The process was shared with the staff for review, comment and questions. The staff provided questions and asked for examples to be presented on how the process would work. NRC confirmed that the process was robust and stated they would monitor the use of the process in the future.

Relevant Standards

- Performance Objective (INPO) ER.4, Activities are implemented to preserve materials and components in a manner that supports safe, long-term, reliable plant operation.
Specifically, the following criteria will be applicable:
 - ER. 4 Criteria 1: Critical materials issues that could hinder reactor vessel and internals or primary system integrity, including steam generators, are understood by station management and are appropriately evaluated, prioritized, and resolved.
 - ER. 4 Criteria 3: Managers proactively respond to emerging industry issues related to materials degradation and aging to ensure safe, reliable operation and to avoid extended shutdowns.
 - ER. 4 Criteria 5: Industry operating experience and information from technical experts and industry working groups are considered in long-range planning to maintain and improve material and passive component reliability.

Relevant Regulatory Requirements:

- The site-specific commitments, such as licensing and design bases, license renewal, and ISI program relief requests, may apply.

Guidance

- Appendix C, "Document Screening" of [NEI 03-08 Rev.3, Guideline for the Management of Materials Issues](#), defines the screening process.

Recommended Industry Actions

- Utilities maintain implementation of requirements as specified in NEI 03-08 for mandatory and needed requirements promulgated by IPs such as the following:
 - PWR Owners Group (PWROG)
 - BWR Vessel and Internals Project (BWRVIP)
 - PWR Materials Reliability Program (MRP)
 - Steam Generator Management Program (SGMP).
- Utilities support development of and provide input to new materials guidance prior to publication.
- IP staff and utility participants in the IP approval process use the screening process to determine if the topical report can be generically released for plant implementation or if NRC approval via SE is warranted prior to such a release.
- Utilities review/adhere to guidance provided by materials IPs for applicability and limitations.
- Utilities revise applicable procedures consistent with license requirements.

Change Management Considerations

Industry Activities

- Industry webinar to provide background for initiative, industry peer discussion, and provide an open forum to clarify expectations and ask questions. Webinar information can be found at <https://web.inpo.org/Pages/Nuclear-Promise-Issues.aspx>
- As a part of applying this document screening process, each IP will collect results from the screening process and will provide an annual information-only notification to NRC regarding application of the screening process.
- EPRI on behalf of the issue programs to maintain the screening process results for use in the future to fully understand the impact of this initiative.

Company Actions

- Assign utility personnel to actively participate in the committees that make up the NEI 03-08 defined IPs. Perform reviews and comment on either new or revised IP guidance as part of the document development and approval process with an understanding that they will communicate applicability and limitations to the station(s) they represent.
- Evaluate newly issued or revised IP guidance against utility/site-specific NRC commitments for any conflicts and consider changing NRC commitments using the guidance provided in NEI 99-04, Guidance for Managing Regulatory Commitment Changes.
- Stations revise applicable procedures to use the revised reports consistent with the condition(s) of their license.

Guidelines

- Each site is responsible for reviewing its site-specific licensing and design bases, license renewal commitments, and ISI program relief requests and alternatives to ensure that there are no plant-specific limitations that would preclude immediate implementation of portions or all of new or revised guidance.
- The EPRI Materials Degradation and Aging Action Plan Committee (MAPC) is responsible for providing oversight of industry activities related to primary system materials. The MAPC develops a strategic approach to materials issues management and prioritization and coordinates between industry entities and IPs to update the NSIAC regarding issue status and INPO engagement.
- Periodic IP self-assessments shall be performed at no greater than three-year intervals. MAPC monitors IP self-assessments and actions in response to deficiencies in program implementation.
- Communication of any issues will be distributed to all MAPC member utilities through existing protocols.
- Coordination of the screening process results will be coordinated by each issue program's Integration Committee.

Report Your Site's Results

Please report your company's implementation of this improvement opportunity, including the date of completion. Send this information along with your company point of contact to EfficiencyBulletin@NEI.org.

Industry Contacts

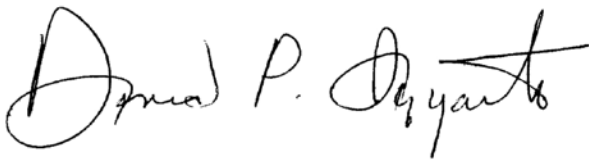
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