

| April 2018

Efficiency Bulletin: 17-14

Improving the Effectiveness of Issue Resolution to Enhance Safety and Reliability

Station leaders adopt common practices and tools to improve issue resolution and reduce administrative burden in the corrective action program (CAP).

Addressees: Chief nuclear officers, NEI APCs and INPO APCs

Issue: CAP-02, Standardization of Industry Corrective Action Programs

Summary of Efficiency Opportunity

- Desired end-state—Industry implementation of NEI 16-07, Improving the Effectiveness of Issue Resolution to Enhance Safety and Reliability, which standardizes and simplifies CAP terminology, concepts and tools and results in more effective use of managers' and supervisors' time such that they have more time to address important plant issues.*
- Value proposition (vision of excellence)—Improve timeliness of and issue resolution for matters affecting safety, quality or compliance by applying efficient analysis tools (when appropriate) and moving non-CAP issues out of CAP resulting in lower CAP backlogs.
- Why is it important?—Current practices result in expending resources on unnecessary or overly complex investigations that impede the ability to quickly diagnose and fix plant issues.

**NOTE: NEI 16-07 was in draft when this EB was first issued in May 2018. NEI 16-07 has now been finalized and is available on the NEI member web site. The text of this EB has been edited to correct verb tense and description of events completed since May 2018.*

Color Code: **RED**
Due: December 2018

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- Industry benchmark value(s)—Implementation of NEI 16-07 will further focus utility corrective action programs on issues related to safety, quality and regulatory compliance and improve efficiency of issue investigations. Further reductions in CAP backlogs are expected, and with improvements in timeliness of issue resolution, personnel will have more time to devote to plant operations that should result in increased station performance.
- Measure of effectiveness—
 - Consistent reporting of issues.
 - CAP volume and backlog decrease.
 - Decrease in the number of investigations.
 - No repeated consequential or significant events.
 - No increase in regulatory violations.

Relevant Standards

- American National Standards Institute (ANSI) N45.2-1971, Quality Assurance Program Requirements for Nuclear Power Plants
- American Nuclear Society (ANS) 3.2/ANSI N18.7-1976, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants
- American Society of Mechanical Engineers (ASME) NQA-1, Quality Assurance Requirements for Nuclear Facility Applications
- Performance Objectives and Criteria (INPO):
 - PI.1, Performance monitoring activities are used to identify gaps between current levels of performance and desired management and industry standards.
 - PI.2, A consistent and deliberate approach is used to investigate problems and plan actions to improve performance.
 - PI.3, Actions to address identified gaps are specific, actionable, measurable, and timely to improve performance.

Relevant Regulatory Requirements

- 10 CFR 50, Domestic Licensing of Production and Utilization Facilities, Appendix B, “Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants”
- NRC Regulatory Guide 1.33, Quality Assurance Program Requirements (Operation), Revision 2
- NRC Inspection Procedure 71152, Problem Identification and Resolution

Guidance

- An industry guideline, NEI 16-07, is provided for incorporation into station issue resolution processes. Guidance provided by this document includes:
 - Clarification regarding the scope of issues required to be addressed through licensee CAP
 - A framework to determine the level of evaluation for CAP issues
 - New tools to improve the investigation of equipment failures, human performance events and organizational issues.
- It is important to note that guidance contained in NEI 16-07 does not change current expectations for problem identification. Station managers are responsible for encouraging employees to raise concerns and maintain a low threshold for issue reporting.
- This initiative standardizes the use of CAP, presents simplified tools and methods, describes the use of other management systems for issue resolution, and eliminates excessive administrative burden for workers and

managers. The process elements provided in NEI 16-07 are consistent with NRC requirements and inspection and enforcement procedures to meet licensee quality assurance requirements.

Recommended Industry Actions

- Evaluate station licensing basis to ensure that any commitments for CAP are not affected by guidance in this efficiency bulletin or in NEI 16-07.
- Revise CAP processes and procedures to align with NEI 16-07.
- Strengthen or maintain CAP screening standards to assure that CAP conditions receive appropriate scrutiny and management attention.
- Implement a risk-informed approach to screening based on probability and consequences to help establish significance and level of effort for conditions.
- Identify those “Approved Processes” per the guidance in NEI 16-07 at your site and ensure they are effectively used to improve issue resolution.
- Transfer Non-CAP issues out of the CAP.
- Eliminate the use of a “one-size fits all” apparent cause determination process and consider adopting the industry tools described in NEI 16-07 to streamline investigations of equipment failures, human performance and organizational issues.

Change Management Considerations

Fleet or site constraints may affect the timing and extent of implementation of the guidance in NEI 16-07. Change management plans will need to identify where conforming changes to other programs and processes may be necessary (e.g., quality assurance program requirements and CAP software). These constraints notwithstanding, each organization should implement the guidance in NEI 16-07. This bulletin was originally issued in May 2018, and has now been revised with the expectation that all sites complete implementation by December 2018. NEI 16-07 Final was issued in April 2018. Prior to finalizing NEI 16-07, several information sharing sessions were conducted so that utility personnel could ask questions and, through examples and case studies, understand how to apply these new CAP concepts. At the end of these sessions, lessons learned were incorporated into NEI 16-07.

Industry Activities

- At the INPO-sponsored PI Manager’s Working Meeting in April 2017, an overview of the document and path forward was provided.
- Industry information sessions as a part of the regulatory utility groups (RUG) were conducted in each region to allow utility personnel to gain experience using new CAP document and screening examples. The following sessions were held:
 - RUG 2—June 20, 2017, Atlanta, sponsored by Bill Pitesa, Duke Energy.
 - RUG 4—July 12, 2017, Arlington, Texas, sponsored by Fadi Diya, Ameren Missouri.
 - RUG 3—October 26, 2017, Lisle, Illinois, sponsored by Tim O’Connor, Xcel Nuclear.
 - RUG 1—November 28, 2017, Philadelphia, sponsored by Pete Sena, PSEG.
- An industry working session on implementation of NEI 16-07 was provided by the corrective action program owner’s group (CAPOG) and hosted by Southern Nuclear at the ANS Utility Working Conference in August 2017.
- Briefings for NRC regional personnel were held in December 2017.
- Additional presentations related to CAP changes were provided at functional area working meetings held at INPO throughout 2017.

Company Actions

- Seek briefing materials and notes from one of the 2017 workshops or information sessions to learn new concepts in NEI 16-07.
- Implement NEI 16-07, including gap analysis of the current program against NEI 16-07 and development of a change management plan for process and behavior changes. The change management plan should include communications on the benefits to safety from implementing these changes.
- Brief resident NRC staff on this initiative and its implementation at your station.
- Conduct employee communication activities (all-hands meetings, small group working meetings, station newsletters, etc.) to inform station employees, supervisors and managers about this initiative. Standard talking points for the industry are being developed by the CAPOG.
- Continue active participation in industry working groups.

Guidelines

The process in NEI 16-07 is consistent with existing NRC regulations and guidance and INPO requirements; however, there are some implementation risks. For example, some employees may believe that problem reporting is being discouraged or that problems will no longer be tracked and addressed. Stations have cultivated a risk-averse mindset that creates a bias to capture all or most station issues in the CAP; some personnel may be reluctant to change this mindset. In addition, station leaders have routinely directed application of cause determination processes to issues beyond those required by regulation and may be hesitant to change this behavior. This risk can be mitigated by effective leadership communications, use of the company's management model and periodic review by oversight organizations. Station personnel may have concerns that departmental-level tracking processes will not have appropriate management engagement, rigor and oversight to effectively resolve issues (i.e., those not placed into the CAP).

- Employee concerns personnel should closely monitor the environment for raising concerns.
- Management should monitor condition report initiation rate to ensure problem reporting is not adversely affected by these changes. Station performance monitoring methods such as trending, management review processes and indicators can provide confidence that issues, especially aggregate issues, are being addressed.
- The use of CAP and Non-CAP systems should be evaluated to ensure that issues are being entered into the correct systems and that issues are being resolved in the most efficient and appropriate processes.
- Backlogs (including management actions) should be periodically reviewed and monitored.
- Management should monitor for recurring events to ensure that organizational and programmatic gaps are corrected.

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.

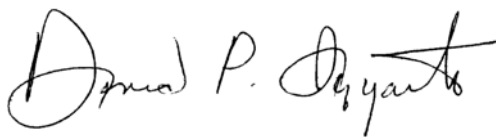
Industry Contacts

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- On the web: <https://www.nei.org/resources/delivering-the-nuclear-promise>

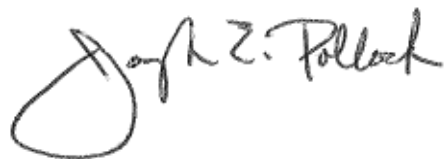
Industry Approval (original EB 17-14):



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Industry Approval (EB 17-14, Rev. 1):

Bill Pitesa, Nuclear Energy Institute

Key to EB 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