



OFFICE OF THE
INSPECTOR GENERAL

**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

April 12, 2017

MEMORANDUM TO: Victor M. McCree
Executive Director for Operations

FROM: Dr. Brett M. Baker */RA/*
Assistant Inspector General for Audits

SUBJECT: STATUS OF RECOMMENDATIONS: AUDIT OF
NRC'S OVERSIGHT OF ACTIVE COMPONENT
AGING (OIG-14-A-02)

REFERENCE: DIRECTOR, OFFICE OF NUCLEAR REACTOR
REGULATION, MEMORANDUM DATED
MARCH 23, 2017

Attached is the Office of the Inspector General's analysis and status of recommendations 1 and 2 discussed in the agency's response dated March 23, 2017. Based on OIG's analysis of this response, recommendations 1 and 2 remain in resolved status.

Please provide an updated status of the resolved recommendations by September 29, 2017. If you have questions or concerns, please call me at (301) 415-5915, or Paul Rades, Team Leader, at (301) 415-6228.

Attachment: As stated

cc: R. Lewis, OEDO
H. Rasouli, OEDO
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J. Bowen, OEDO
EDO_ACS_Distribution

Audit Report

AUDIT OF NRC'S OVERSIGHT OF ACTIVE COMPONENT AGING

OIG-14-A-02

Status of Recommendations

- Recommendation 1: Perform and document a thorough and systematic evaluation of the need for an NRC program to oversee the management of active component aging activities, all within the context of the current ROP environment. Evaluation elements are to include, but should not be limited to, the need for:
- (a) Program policies, goals, and objectives.
 - (b) Program feedback and corrective actions for continual improvement.

Agency Response Dated
March 23, 2017:

Staff Response and Status Update: The NRC staff and OIG agreed that completion of the seven action items associated with the study by the Office of Nuclear Reactor Regulation Operating Experience Branch (IOEB), "IOEB Analysis Team Study, Component Aging Study (2007–2011)—Insights from Inspection Findings and Reportable Events," dated February 19, 2013, (ADAMS Accession No. ML13044A469, enclosure), will resolve Recommendation 1. The enclosure to this memorandum shows the current status of the staff's actions from that IOEB study.

CONTACT: John W. Thompson, NRR/DIRS
(301) 415-1011

[From Enclosure] Recommendations from Office of Nuclear Reactor Regulation, Division of Inspection and Regional Support, Operating Experience Branch Report, "Study on Components Exceeding Recommended Service Life" Planned Actions and Current Status:

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Status of Recommendations

Recommendation 1 (cont):

2012 Active Component Failure Study

Recommendation 1: Issue an operating experience communication describing the study findings and recommendations.

Planned/Completed Actions: The Office of Nuclear Reactor Regulation (NRR) issued an operating experience communication in June 2012. Operating experience communications are distributed to U.S. Nuclear Regulatory Commission (NRC) staff only.

Status: Complete
Point of Contact (POC): John Thompson

2012 Active Component Failure Study

Recommendation 2: Present study findings and recommendations to the NRR executive team in a significant topics briefing.

Planned/Completed Actions: The staff briefed the NRR executive team in November 2012.

Status: Complete
POC: John Thompson

2012 Active Component Failure Study

Recommendation 3: Consider issuing a generic communication to alert the industry that the operation of equipment that is important to safety beyond its qualified service life without adequate justification is contrary to regulatory requirements and NRC expectations.

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Status of Recommendations

Recommendation 1 (cont.):

Planned/Completed Actions: March 2017 Update: The staff is in the final concurrence stage of issuing a regulatory issue summary (RIS) on the time period for how long safety-related structures, systems, and components (SSCs) remain in service. The staff's target date for final issuance of the RIS is April 2017.

Status: TIA complete, May 2015; TIA withdrawn, October 2015; Draft RIS, complete July 2016; final RIS, April 2017
POC: John Thompson

2012 Active Component Failure Study

Recommendation 4: Consider how inspectors could be better prepared to identify instances in which licensees are operating SSCs that are important to safety beyond their reasonable expected service life without an adequate engineering justification. Additional guidance and training could be used to alert more inspectors on how they can pursue these issues using criteria from Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities."

Planned/Completed Actions: Revise selected inspection procedures (e.g., Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," dated May 6, 2016) and conduct associated inspector seminars. The staff may deliver seminars through telecommunications or at the semiannual resident inspector counterpart meetings.

March 2017 Update: The staff notified the Office of the Inspector General by e-mail on October 7, 2016, that it plans to revise Recommendation 4 to suspend efforts to

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Status of Recommendations

Recommendation 1 (cont.):

add an example to IMC 0612, Appendix E, "Examples of Minor Issues," dated August 11, 2009. Instead, the staff will develop inspection guidance and a training seminar showing inspectors how to address situations that involve the length of time that SSCs remain in service when licensees become aware of relevant information. As with the previous Recommendation 4 from the Operating Experience Branch study, the staff will continue to give periodic updates on the status of this effort and the other recommendations.

Status: IMC 0612 (discontinued with revision to conduct training and inspection guidance); Training seminar to be issued (June 2017); Inspection guidance to be issued (August 2017)
POC: John Thompson

2012 Active Component Failure Study

Recommendation 5: Brief the NRC regional office Branch Chiefs responsible for component design-basis inspections and the regional operating experience POCs to alert them to the findings of this study.

Planned/Completed Actions: The staff briefed several regional office managers in November 2012. The staff conducted an updated briefing on November 3, 2014, for the four regional Branch Chiefs responsible for component design-basis inspections (and their respective Division Directors) to clarify planned actions and to solicit additional comments.

Status: Complete
POC: John Thompson

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Status of Recommendations

Recommendation 1 (cont.):

2012 Active Component Failure Study

Recommendation 6: Conduct a Temporary Instruction (i.e., a one-time inspection) to evaluate whether licensees are documenting appropriate engineering justifications for SSCs in service beyond qualified service life. Results may inform further staff actions, such as enhancements to the baseline inspection program.

Planned/Completed Actions: The staff will make a decision on whether there is a need for a Temporary Instruction to collect data about licensees' management of component service life. This decision will be based in part on NRC/industry dialogue following development of a generic communication and NRC analysis of any follow-on initiatives proposed by industry.

March 2017 Update: The staff believes that the RIS, inspection guidance, and inspector training taken together will alleviate the need for a TI.

Status: Complete (see Item 4 for training and inspection guidance dates)
POC: John Thompson

2012 Active Component Failure Study

Recommendation 7: Consider engaging industry to propose a revision to NRC Regulatory Guide 1.160, "Monitoring the Effects of Maintenance at Nuclear Power Plants," and NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," to increase discussion of the validity of time-based preventive maintenance (periodic refurbishment and replacement) or life-cycle management, or both.

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Status of Recommendations

Recommendation 1 (cont.):

Planned/Completed Actions: The staff briefed industry representatives on the need for additional regulatory guidance and industry attention to this issue. This will naturally occur as a consequence of the other planned activities as described in response to Recommendations 3 and 6 above.

Status: Complete
POC: John Thompson

OIG Analysis:

The agency's proposed actions to complete the actions associated with the 2012 Active Component Failure Study (*IOEB Study*) recommendations contained in the enclosure to this agency response meet the intent of the OIG recommendation. OIG will continue to monitor the agency's planned/completed actions for *IOEB Study* Recommendations 3, 4, and 6. Specifically, with regard to:

IOEB Study Recommendation 3: Per discussion with staff, OIG notes that the RIS is in final review after incorporation of public comments. OIG will review the RIS when the final version is issued.

IOEB Study Recommendation 4: OIG will review the training seminar upon issuance in June 2017. OIG will also review the inspection guidance upon issuance in August 2017.

IOEB Study Recommendation 6: OIG will continue to monitor staff progress in implementing training and inspection guidance in response to *IOEB Study* Recommendation 4 as a means of addressing *IOEB Study* Recommendation 6.

Status: Resolved.

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Status of Recommendations

Recommendation 2: Develop and incorporate the mechanisms for monitoring, collecting, and trending age-related data for active components within NRC policy and procedures.

Agency Response Dated
March 23, 2017:

Staff Response and Status Update: The NRC staff concluded a pilot of the Operating Experience (OpE) Data Analysis Tool (ODAT) in December 2016. This tool can be used for trending of operating experience, including age-related failure data for active components. The tool is available using Chrome at <http://fusion.nrc.gov/nrr/team/dirs/ioeb/odat/index.html>. ODAT's availability was communicated to NRC through issuance of OpE Note 016 in December 2016 (ADAMS ML16356A571) as well as through regional webinars. The staff plans to document use of the ODAT in a handbook or office instruction, or both, during fiscal year 2017.

OIG Analysis: The agency's action continues to meet the intent of the recommendation. OIG will close the recommendation once NRC implements this pilot program and provides verifiable documentation that NRC monitors, collects, and trends age-related data for active components, and has included these measures in agency policy and procedures.

Status: Resolved.