

## PERFORMANCE INDICATOR AREA

### OVERVIEW

The Reactor Oversight Process (ROP) enhancement initiative included three recommendations for the performance indicator (PI) thematic area. These recommendations focused on PI revisions and overall enhancements to the PIs. The industry proposed partial closure of one recommendation, and the remaining recommendations require additional evaluation. The disposition of all recommendations will be documented in a memo from Ho K. Nieh to Daniel H. Dorman and will be made publicly available when issued.

### DISCUSSION

The staff reviewed PI recommendations by considering the extent to which the existing PIs were consistent with their bases and effective in providing meaningful risk-informed performance information for operating reactors. The staff continues to view the PI program as appropriate and effective in overseeing licensee performance; however, it recognizes that the program can always be improved. The staff sought improvements in the clarity, efficiency, and reliability principles when evaluating these recommendations.

### COMPLETED ACTION(S)

There are no completed actions.

### RECOMMENDATIONS REQUIRING ADDITIONAL EVALUATION

#### Nuclear Energy Institute (NEI) Recommendation 1G

This recommendation is a suggestion to revise the use of the mitigating systems performance index (MSPI) and to reevaluate the NRC's treatment of the MSPI. Specifically, the industry recommended considering the elimination of the overlap between the MSPI and inspections of safety systems monitored by MSPI. The industry suggested simplifying or replacing the MSPI with an indicator based on similar data that are collected for related purposes (e.g., for Title 10 of the *Code of Federal Regulations* (10 CFR) 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"). The industry further asserted that plant changes and modifications significantly improved safety and the MSPI margin. At the ROP public meeting on November 15, 2018, and a public meeting on December 13, 2018, that focused on the assessment area for ROP enhancement, the industry indicated it was in the early stages of developing a possible MSPI replacement. The industry presented a high-level qualitative overview of this proposed concept at the ROP public meeting on January 17, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19017A020). The staff is currently evaluating this recommendation.

It further recommends eliminating the calculation of planned unavailability in the current MSPI PIs. An industry presentation included this proposal at the January 17, 2019, ROP public meeting. The staff is evaluating this recommendation to determine whether this

aspect of MSPI would remain accurate and consistent with its basis if the recommendation is implemented.

Transformation Initiative Recommendation 144

This recommendation stated that the staff should identify areas where performance-based, risk focused indicators could be established with appropriate thresholds for allowing licensee oversight in lieu of the U.S. Nuclear Regulatory Commission (NRC) inspections. An example was provided to reduce inspection for plants in the upper half or upper quartile in radiation protection performance, with some continued inspection of high risk activities such as reactor pressure vessel head work.

Transformation Initiative Recommendation 171

This recommendation requested that the NRC establish PIs where the licensee’s probabilistic risk assessment (PRA) risk metrics are monitored to identify trends for determining oversight that are efficient and effective for risk-informed operations. Because this recommendation discusses the incorporation of PRA information into PIs, the staff is crediting the ongoing work on Recommendation 1G (an MSPI revision) to address this recommendation. The MSPI PIs (or a suitable replacement) would be the most appropriate for incorporating additional risk insights.

Transformation Initiative Recommendation 587

This recommendation requested that the NRC reevaluate the ROP PIs. The staff has initiated an evaluation of all PIs. As summarized in the table below, the NRC will assess the PI changes in accordance with the guidance in Section 09.03.c of Inspection Manual Chapter 0608, “Performance Indicator Program,” relative to significant changes to the PI program.

PI	Notes
Initiating Events	No proposed changes.
Mitigating Systems	Changes proposed in accordance with Recommendation 1G.
Barrier Integrity	Evaluation of the reactor coolant system leakage PI and determination of whether it should report total leakage rather than identified leakage in accordance with ROP Feedback Form 0308.1-1651.
Radiation Protection	Staff considered adjusting the Occupational Radiation Safety PI to add an aspect that would track as low as is reasonably achievable performance; this effort is no longer being pursued because industry performance in ALARA is good and continues to improve.
Emergency Preparedness	<p>Recommendation 3A:</p> <p>Focused Self-Assessment (FSA) Report Idea 2.B (ADAMS Accession No. ML18331A374): Consider eliminating the Alert and Notification System PI.</p> <p>FSA Report Idea 2.C: Use the ROP program as an acceptable approach to justify a 24-month emergency preparedness review periodicity in accordance with 10 CFR 50.54(t).</p>

Security	No proposed changes (i.e., the existing PI is viewed as appropriate)
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Transformation Initiative Recommendation 784

This recommendation stated that the ROP is almost 20 years old, and it is time to revamp oversight. Licensees will put the most effort into the areas inspectors focus on, so the staff should periodically review effectiveness (i.e., performance indicators).

Staff Response

The staff is evaluating Recommendations 1G, 144, 171, 587, and 784. The staff expects to complete an evaluation of possible PI changes some time in calendar year 2020 utilizing the existing PI change process outlined in IMC 0608, "Performance Indicator Program."

Planned staff activities in the EP area are described in Enclosure 5.

**STAKEHOLDER VIEWS**

There were no additional stakeholder views noted.