



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

January 3, 2019

MEMORANDUM TO: Gregory T. Bowman, Chief  
Reactor Assessment and Human Factors Branch  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

FROM: Alexander D. Garmoe, Senior Reactor Operations Engineer */RA/*  
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SUBJECT: SUMMARY OF THE REACTOR OVERSIGHT PROCESS  
ENHANCEMENT PUBLIC MEETING ON THE ASSESSMENT AND  
MITIGATING SYSTEMS PERFORMANCE INDEX AREAS HELD ON  
DECEMBER 13, 2018

On December 13, 2018, the U.S. Nuclear Regulatory Commission (NRC) staff hosted a public meeting with the Nuclear Energy Institute's (NEI's) ROP Task Force and other industry representatives. The purpose of the meeting was to discuss the staff's progress in reviewing ROP enhancement recommendations that the staff has determined fall into the Assessment and Mitigating Systems Performance Index (MSPI) areas. A summary of the discussion topics is provided below.

The Deputy Director for the Division of Inspection and Regional Support and the Branch Chief of the Reactor Assessment and Human Factors Branch provided opening remarks summarizing the high priority the agency is placing on the ROP enhancement project and the challenging timeline staff must meet to support delivering a SECY paper to the Commission in mid-calendar year 2019. There was also opening discussion among several of the meeting participants about the structure and framework of NRC's review of the ROP enhancement recommendations.

The staff then discussed its review to date of three recommendations in which significant progress toward proposed dispositioning has been made.

Recommendation 2A: Revise Public Communications on White Findings

The staff discussed its review to date of Recommendation 2A to discontinue the practice of issuing press releases for White findings. Prior to the November 15, 2018, ROP public meeting,

Enclosures:

1. Attendance List
2. List of Recommendations

the staff reviewed press releases for the past year and found that out of six White findings issued in that timeframe, two received press releases. Management from the Office of Nuclear Reactor Regulation (NRR) discussed guidance on press releases with the Office of Public Affairs (OPA) and found that the OPA guidance would generally not result in issuance of a press release for a White findings that moves a plant from Column 1 to Column 2 of the Action Matrix. The staff acknowledged that there appeared to be some instances in which that guidance was not fully followed, and OPA agreed to reinforce adherence to guidance with its public affairs officers.

Based on comments from some industry representatives at the November 15 public meeting, the staff also discussed Enforcement Manual guidance on press releases. Specifically, staff reviewed Section 1.2.18 of the Enforcement Manual, "Press Releases," which states that "...press releases are not normally issued for escalated NOVs [Notices of Violation] proposed without a civil penalty..." "OPA may choose to issue a press release for escalated NOVs associated with an SDP [Significance Determination Process] finding," and "OPA may also choose to issue press releases for other enforcement actions that they view as newsworthy." Some industry representatives expressed a view during the meeting that the treatment of escalated NOVs without a civil penalty did not appear to be consistent with the treatment of escalated NOVs without a civil penalty but with an associated SDP finding.

Some industry representatives raised concerns about NRC's use of social media, noting that information could be released, particularly on Twitter, before senior industry representatives at the site were aware of it. The staff reviewed the agency's Twitter use over the past year. Of the 423 tweets issued by the agency, only one announced issuance of a White finding, and 13 involved plant performance (start of a special inspection, plant shutdown due to a hurricane, etc.). Industry expressed interest in specific OPA guidance on issuing press releases and the NRC's social media policy, and noted that they want predictability and accuracy in any NRC press releases or tweets. The staff stated that it would provide this feedback to OPA for their consideration.

Ed Lyman from the Union of Concerned Scientists (UCS) provided comments on the agency's communication of White findings. He stated agreement with existing agency practices associated with press releases and that its use of social media was appropriate, and he felt the agency should not change its policies to reduce communication with the public.

Overall, the staff indicated that it is planning to consider work on this recommendation complete based on actions taken by OPA to reinforce consistent adherence to existing guidance. The need for any additional actions in response to this recommendation or the discussion at the previous two ROP public meetings will be referred by OPA.

#### Recommendation 2B.5: Promptly Close White findings

This recommendation specifically states:

Close White findings upon successful completion of the resident inspector follow-up of the causal analysis for individual White findings. Make corresponding and consistent policy changes for Columns 3 and 4 when dealing with individual and isolated findings.

This assures that escalated inspection attention is maintained only while ongoing plant risk is above nominal. Once the risk is returned to baseline, the inspection to ensure sustainability of corrective actions is provided by resident inspector monitoring.

The staff discussed its review to date of this recommendation, which was focused on the timing of closure of White findings. The staff discussed that it is still evaluating the industry's suggestion that follow-up inspection for White findings be conducted by the resident inspectors or on the scope or level of effort of such follow-up and will discuss those proposals at a future public meeting.

The staff indicated that it supports the proposed recommendation to close White findings upon successful completion of a supplemental inspection, rather than requiring the finding to remain open for at least four quarters as described in current program guidance. During the meeting, the staff also discussed its review of the treatment of performance indicators (PIs) as Action Matrix inputs. The staff discussed that while both White findings and PIs lead to the same programmatic response – a supplemental inspection to verify the causes of the issue have been addressed – there are differences in how PIs are treated from an assessment perspective. Specifically, under the current process:

1. If a PI returns to Green before the supplemental inspection is completed, then the PI is no longer an input into the Action Matrix.
2. If the supplemental inspection for the White PI determines it was not been adequately addressed, a parallel White finding is opened and the issue is once again an input into the Action Matrix.
3. The parallel White finding remains open until the supplemental inspection has determined that the issue has been appropriately addressed.

The staff indicated that it believes the current approach for treatment of PIs could be made more transparent and clear by establishing consistent treatment of White findings and PIs in the Action Matrix. As such, the staff indicated that it is proposing that once a White input occurs, regardless of whether it's a PI or an inspection finding, it should remain an Action Matrix input until the supplemental inspection determines that adequate corrective actions have been taken.

During the public meeting, some industry representatives raised objections to the staff's proposed change to the treatment of PIs, asserting that they are different than findings since PIs are measuring data over a period of time, whereas findings are the result of a discrete licensee performance issue. An industry representative further noted that PIs are treated differently than findings in the Action Matrix by design because they are, in fact, different. Specifically, the industry representative advocated that PI performance data returning to Green is in and of itself sufficient to demonstrate that the underlying issue has been resolved.

Staff agreed to consider industry feedback received during the public meeting and continue its review of this recommendation and its proposed disposition.

#### Recommendation 2B.6: Redefine Finding Labels

The staff discussed its review to date of Recommendation 2B.6 to redefine the labels for White and Yellow findings. Specifically, the recommendation is to change the labeling of White findings from "low to moderate" safety significance to "low" safety significance and Yellow findings from "substantial" safety significance to "moderate" safety significance.

The staff reviewed a number of ROP basis and historical documents and did not identify a specific basis for the use of the current labels. Staff noted that the industry's proposed labeling aligned better with Action Matrix column definitions. For example, Column 2 is defined as "Cornerstone objectives met with minimal degradation in safety performance," and Column 3 is defined as "Cornerstone objectives met with moderate degradation in safety performance." These line up well with characterizing a White finding that leads directly to Column 2 as "low" safety significance and a Yellow finding that leads directly to Column 3 as "moderate" safety significance. As such, the staff is proposing to adopt the recommendation to relabel findings as a change that enhances and clarifies communication of the risk significance of issues with the public. The staff indicated that proposing to adopt this recommendation in no way implies that the actual risk significance of a GTG finding is different moving forward; this is only a change to improve public communication of GTG findings. Other recommended changes to the treatment of, and follow-up to, GTG findings will be assessed on their own merits.

Following discussion of these three recommendations in which significant efforts have already been undertaken, the staff discussed at a higher level the remaining recommendations and provided the opportunity for comments in advance of a more thorough discussion at the next ROP public meeting.

#### Recommendation 2B.1: Combine Columns 1 and 2

The staff discussed this recommendation and recalled discussion at the November 15 public meeting, in which industry recognized the resource burdens of literally combining Columns 1 and 2. During the December meeting, industry representatives discussed that more modest changes might be appropriate and address the overall concern more efficiently than actually combining Columns 1 and 2. One suggestion, offered by the industry, would be to clarify in the Action Matrix that Columns 1 and 2 both represent nominal plant performance and that transition between them is expected from time to time. The staff indicated that it is open to consideration of this and other less resource intensive changes and intends to discuss a proposed disposition of this recommendation at the next public meeting.

Ed Lyman of UCS provided comments generic to all of the recommendations regarding Action Matrix changes and treatment of findings. He stated that UCS is opposed to any efforts to merge Action Matrix columns, eliminate White findings, or reduce the significance and follow-up of White findings. He noted that UCS and the public rely on the ROP and the Action Matrix to drive follow-up of issues and communicate plant performance.

#### Recommendation 4C: Open up Communications About Inspection Results

The staff previously discussed this issue at the November 15 ROP public meeting. At that meeting the staff requested clarification on the scope of this recommendation, specifically to determine if the recommendation was focused on inspection issues or more broad in scope. Industry commented on recent experience with the Task Interface Agreement (TIA) process, in which it was difficult to get information on the NRC's review of a technical issue, find out where in the process the agency was, and to communicate that the licensee was not in agreement with all the facts the agency was using. As a result, the staff began to view this issue as more broad than just ROP or finding dispositioning.

During the December meeting, the staff discussed that, given the apparent broad scope of the

recommendation, the ROP enhancement initiative may not be the best mechanism for resolving it. The industry clarified that they had seen improvement in the TIA process over the past couple of years and that this recommendation is largely focused on communications surrounding the disposition of inspection findings. Specifically, industry indicated that it has experienced challenges aligning on the performance deficiency and inputs to the agency's risk modeling of inspection findings. Industry also commented that in one particular instance, the regional office provided a deadline after which information provided by the licensee would no longer be considered. Additional specifics were not provided so staff was unable to determine whether the instances cited revealed weaknesses in staff's adherence to process or the agency's process itself.

The staff discussed that there is a balance between continuing to develop and evaluate information and the need to make timely regulatory decisions. The Inspection Finding Resolution Management (IFRM) process, which was permanently adopted through recent revisions to inspection program guidance, is intended to strike this balance and improve communications between agency and licensee management. Review of the pilot process revealed inconsistent implementation of the IFRM process, which the staff intends to address through the rollout of improvements to the permanent procedures. The staff also intends to conduct an effectiveness review of the permanent procedure revisions, in part to determine if consistency issues have been resolved.

The staff indicated that it believes it is appropriate to credit implementation of the IFRM process to address this issue. Industry commented that they are supportive of IFRM, but noted that it does not apply to traditional enforcement. Staff acknowledged that IFRM is specific to ROP findings only at this point. Additional discussion on this topic is anticipated at the next public meeting.

#### Recommendation 4D: Standardize Issue Escalation Practices

The staff noted that at the November 15 public meeting, industry confirmed that this recommendation was actually an action they were undertaking to provide a framework on how licensees would engage with NRC management when escalating issues. Discussion on details of this process are anticipated in early 2019.

The staff then discussed additional recommendations transmitted in an August 13, 2018, memorandum to Brian Holian, Acting NRR Office Director, from Dan Dorman, Transformation Team Lead. This memorandum contained recommendations that were submitted to NRC's Transformation Team and subsequently referred to NRR for evaluation. The staff indicated that it has nearly completed its binning of these recommendations into the ROP enhancement thematic areas and determined those that are out of scope of the project.

Staff will include discussion of these recommendations at the next ROP public meeting.

#### Recommendation 1G: Revise Use of Mitigating Systems Performance Index (MSPI)

The staff opened the meeting for discussion on industry's recommendation to revise or replace MSPI. At the November 15 public meeting, the industry indicated they were in the early stages of developing a proposal for modifying or replacing MSPI. During this meeting, the industry

indicated that they would likely be ready for discussion on their proposal at a conceptual level at the next public meeting. From a high level, industry discussed that they are looking to develop a core damage frequency-trending concept and reduce the burden associated with trending planned and unplanned unavailability. The overall project timeline would be lengthy, as development of a concept continues, discussion and alignment around a concept must occur, and a pilot project would be conducted before any final implementation. The level of management approval needed must also be determined.

At the conclusion of the meeting, there was agreement from both NRC and industry to plan on conducting the next ROP public meeting on January 17, 2019. There was also agreement that dialogue on this subject has been productive and that staff would continue to solicit and consider comments and feedback as the recommendations are reviewed.

SUBJECT: SUMMARY OF THE REACTOR OVERSIGHT PROCESS ENHANCEMENT  
PUBLIC MEETING ON THE ASSESSMENT AND MITIGATING SYSTEMS  
PERFORMANCE INDEX AREAS HELD ON DECEMBER 13, 2018  
JANUARY 3, 2019

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**REACTOR OVERSIGHT PROCESS PUBLIC MEETING  
ATTENDANCE LIST  
December 13, 2018**

Deann Raleigh	Curtiss Wright	Billy Dickson	NRC
Larry Parker	STARS Alliance	Greg Bowman	NRC
Greg Halnon	FirstEnergy	Alex Garmoe	NRC
David Gudger	Exelon	Don Helton	NRC
Mike Murray	STP	Tekia Govan	NRC
Ron Gaston	Entergy	David Aird	NRC
Alison Brown	FPL	Mary Anderson	NRC
Chris Nolan	Duke Energy	Russell Gibbs	NRC
Harry Balian	PSEG	Larry Burkhart	NRC
Kirsten Stokes	PSEG	Rob Krsek	NRC
Justin Wearne	PSEG	Annie Mayer	NRC
Scott Diven	Exelon	Reinaldo Rodriguez	NRC
James Slider	NEI	Laura Kozak	NRC
Tony Zimmerman	Duke Energy		
Mike Schoppman	Certrec		
Greg Richardson	EPM, Inc.		
Chris Earls	NEI		
Terry Reiss	Southern Nuclear		
Erin Henderson	TVA		
Edwin Lyman	Union of Concerned Scientists		



**REACTOR OVERSIGHT PROCESS PUBLIC MEETING  
LIST OF RECOMMENDATIONS IN ASSESSMENT AND MSPI AREAS**

1G	<p>Revise Use of Mitigating Systems Performance Index</p> <p>Reevaluate the NRC’s treatment of the MSPI. Consider eliminating overlap between MSPI and inspections of safety systems monitored by MSPI or simplifying or replacing MSPI with an indicator based on similar data collected for related purposes (e.g., for Maintenance Rule monitoring).</p> <p>To improve MSPI margin, plant changes have been made that significantly improve safety as well as MSPI margin. With the increased MSPI margin, the indicator offers limited remaining value as it is difficult to exceed the White threshold. The Maintenance Rule monitors the health of the subject systems. Additionally, the new regime for engineering inspections provides adequate assurance of safety system performance in addition to the resident inspectors’ monitoring of plant status and CAP.</p>
2A	<p>Revise Public Communications on White Findings</p> <p>NRC should discontinue the practice of issuing a press release for White findings. White findings are documented in Inspection Reports and assessment letters and should be treated as normal variations in performance as described in the original ROP construct.</p>
2B.1	<p>Combine Columns 1 and 2</p> <p>Combine Action Matrix Columns 1 and 2 into one column called “Nominal Plant Operation.” There would be a change of columns only if findings with safety significance of moderate (Yellow) or high (Red) were identified.</p> <p>This would eliminate the aggregation of White findings and allow the plant’s CAP to work as designed in support of nominal plant operation. Plants today nominally operate with baseline CDFs between 10-5 and 10-6/yr. Also, this would establish a column change as a more significant event the public would better understand.</p>
2B.5	<p>Promptly Close White Findings</p> <p>Close White findings upon successful completion of the resident inspector follow-up of the causal analysis for individual White findings. Make corresponding and consistent policy changes for Columns 3 and 4 when dealing with individual and isolated findings. This assures that escalated inspection attention is maintained only while ongoing plant risk is above nominal. Once the risk is returned to baseline, the inspection to ensure sustainability of corrective actions is provided by resident inspector monitoring.</p>

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2B.6	<p>Redefine Finding Labels</p> <p>Establish labels of Green as “very low safety significance,” White as “low safety significance,” Yellow as “moderate safety significance,” and Red as “high safety significance.”</p> <p>This clarifies the communication aspect of the color and eliminates color definition overlap that is confusing and sends a message that there is only a broad understanding of the significance rather than a true understanding of a more precise characterization of significance.</p>
4C	<p>Open Up Communications about Inspection Results:</p> <p>The NRC should maintain open communications with the licensee through all stages of the inspection process, including presentations to the Significance and Enforcement Review Panel (SERP) process. To this end, the NRC should discontinue use of the "pre-decisional" label to justify not communicating with the licensee during the vetting process for violations and findings. This “blackout” is not conducive to complete information exchange in the decision making processes and should be discontinued.</p>
4D	<p>Standardize Issue Escalation Practices:</p> <p>Industry will develop a best practices document which formalizes the escalation of issues resulting from disagreements with inspection results and conclusions. Many sites deal with disagreements on a case-by-case basis. A few licensees have a formal escalation and communication process that could benefit the industry and give the NRC some consistent and reliable expectations of licensee communications. Industry will work with NRC in the development of this guidance document to ensure mutual understanding and shared expectations.</p>
153	<p>Review the Reactor Oversight Process (ROP) to remove White findings and make it less detailed.</p>
171	<p>Enhance the Reactor Oversight Program (ROP) to establish performance indicator(s) where the licensee's probabilistic risk assessment risk metrics are monitored to identify trends for determining oversight that is efficient and effective for risk-informed operations.</p>
231	<p>Streamlined Regulatory Oversight</p> <ul style="list-style-type: none"> <li>• Recognize sustained high regulatory performance through reduced regulatory oversight (e.g., fee reduction or inspection less than baseline).</li> <li>• Revamp inspection procedures to emphasize risk and less licensing/design basis approach.</li> <li>• Simplify the "no violation" or low risk violation report (e.g., transition to materials Form 591 inspection report formats).</li> <li>• Reduce columns in Reactor Oversight Process Action Matrix.</li> </ul>

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250	The Reactor Oversight Process (ROP) was designed to be a performance based and risk- informed process - incorporating both qualitative and quantitative inputs for a more integrated and robust regulatory outcome. However, the Significance Determination Process (SDP) for the Initiating Events, Mitigating Systems and Barrier Integrity cornerstones uses numerical thresholds with little to no consideration for other qualitative information pertinent to the performance deficiency. Therefore, the SDP needs a transformation to move the pendulum away from risk- based to risk-informed solutions factoring in performance attributes (e.g., is the problem corrected, was the problem licensee identified, were there multiple opportunities to identify the problem, etc.), as is appropriate.
278	Expand credit for self-identification - incentive for stronger audit programs.
337	Change the categorization to only escalated (Greater than GREEN) and non-escalated (GREEN or minor), this will eliminate a significant amount of resources spent by both the licensees and the agency on determining various levels that do not directly add value to our mission. Moreover, since the GREEN and minor violations have no impact on action matrix, combine them. Further consideration could be giving to possibly re-establish the Greater to GREEN threshold to a slightly high Significance Determination Process value.
339	Only consider Performance Deficiencies (PD) that occurred in the last three years for input to the action matrix. This will focus our resources on current licensees' performance. Older PDs still need to be corrected by the licensees as required by Appendix B, and our follow up could be similar to the current Notice of Violation process, i.e., the licensees' provide a written response with NRC in-office reviews. Also, licensee-identified violations and findings that are Greater than GREEN, are also not subject to action matrix input and follow the established Notice of Violation approach. Both of these changes should be great incentives to the licensees. As additional incentive for the licensees to proactively identify issues, add a weighting factor to the risk assessment for all NRC-identified findings that do not screen to GREEN, in other words, those findings that require a detailed risk assessment. Because, if the NRC identified the PD, the licensee could have identified it, and therefore the licensee's failure to identify the PD is indications of poor licensee's performance.
340	Revise the action matrix to eliminate the cornerstone concept and have the columns escalated based solely on the number of findings regardless of the cornerstone. Specifically: Column 1 zero escalated finding/performance indicators (Pis); Column 2 one escalated finding/Pis - Inspection Procedure (IP) 95001; Column 3 two escalated findings/Pis - IP 95002; Column 4 three escalated findings/Pis- IP 95003; and Column 5 four or more escalated findings/Pis Manual Chapter 0350.
584	Reactor Oversight Process - eliminate green findings.
587	Reactor Oversight Process - reevaluate the performance indicators.

**REACTOR OVERSIGHT PROCESS PUBLIC MEETING  
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618	Do more to emphasize the low to moderate risk of White findings and have less hours spent on this range of risk. Limit any detailed risk evaluation for events where scoping review shows risk will be less than SE- 6. Do not accept additional input on risk significance for those items scoping runs show to be less than 5 E -6 after 120 days from initial finding (emphasizes best available information).
627	We have to stop spending any significant resources on items of very low significance (Green and minor issues), including minimal to no documentation, no evaluation of minor or more than minor, no cross cutting except for safety culture issues, no Green findings without violations. We spend way too many valuable resources on these items now.
839	Eliminate White Findings - Findings should be focused on risk significant issues. For example, the White ROP threshold should be eliminated so that only green, yellow and red findings are issued. This will eliminate a very large amount of low-value work by the NRC and the licensees in evaluating low-risk White issues. A common unintended consequence of a White finding is the significant expenditure of NRC and industry resources that do not result in a corresponding safety benefit.
842	I suggest modifying the Significance Determination Process so that Green and White are combined into Green. The color scheme would then be Green, Yellow and Red. For the Initiating Events, Mitigating Systems, and Barrier Integrity cornerstones, Green would then be anything below a delta Core Damage Frequency (GDF) of 1E-5 or delta Large Early Release Frequency of 1E-6. RG 1.174 could support this change given that a delta GDF below 1E-5 is generally considered to be low risk.