



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

April 4, 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: Tekia V. Govan, Project Manager **/RA/**  
ROP Support and Generic Communication Branch  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE REACTOR OVERSIGHT PROCESS MONTHLY  
PUBLIC MEETING ON MARCH 7, 2019

On March 7, 2019, the U.S. Nuclear Regulatory Commission (NRC) staff hosted a public meeting with the Nuclear Energy Institute's (NEI's) Reactor Oversight Process (ROP) Task Force and other industry representatives primarily to discuss the staff's progress on the ROP enhancement initiative. A summary of the discussion topics is presented below.

In opening remarks, NRC management discussed the goals and objectives of the initiative and stressed the importance of the project for improving the ROP. The NRC reiterated from the January 2019 meeting that the fundamentals of the ROP are sound and that the ROP enhancement initiative is not looking to rebuild the foundation of the ROP, but rather to make process changes to improve its efficiency and effectiveness considering the NRC's Principles of Good Regulation. The staff will prepare a Commission (SECY) paper outlining proposed changes to the ROP, scheduled to be completed in June 2019.

The NRC staff continued the meeting by providing the status of the following thematic areas: significance determination process (SDP), assessment, ROP inspection, independent spent fuel storage installation (ISFSI) inspections, mitigating systems performance index (MSPI), emergency preparedness, security, and radiation protection.

The enclosure provides the attendance list for this meeting.

Enclosure: As stated

### **Significance Determination Process**

The NRC staff discussed the three categories for the related recommendations: risk tools, detailed risk evaluation guidance, and ROP framework. The staff described the current proposed path for resolution and closure of the ROP enhancement recommendations. Some participants from industry raised a concern regarding the NRC staff's characterization of the partial acceptance of the industry's recommendation regarding Inspection Manual Chapter (IMC) 0609 Appendix A, "Significance Determination Process for Findings At-Power," and IMC 0609, Appendix O, "Significance Determination Process for Mitigating Strategies and Spent Fuel Pool Instrumentation (Orders EA-12-049 and EA-12-051)." The industry stated that the NRC staff's plans do not reflect acceptance of the recommendation, as the staff does not plan to merge these two appendices in to a new appendix devoted to "beyond design basis event" SDP. Rather, the NRC staff intends to add Appendix O in to a forthcoming revision of IMC 0609 Appendix A. Further, the staff plans to keep Appendix L, "B.5.b Significance Determination Process," separate due to the unique nature with respect to mitigating losses of large areas of the plant due to fires and explosions, as well as the fact that the capabilities in question are not routinely modeled in probabilistic risk assessments (thus its use of a deterministic SDP).

### **Ongoing Significance Determination Process Updates**

On February 25, 2019, the NRC staff issued a revision to IMC 0609, Appendix H, "Containment Integrity Significance Determination Process." This revision is available on the NRC's public Web site (<https://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/index.html>).

### **Assessment**

The staff began with a brief recap of the recommendations whose disposition had been discussed previously:

- NEI Recommendation 2A to eliminate press releases for White findings (closed with reinforcement to adhere to existing guidance)
- NEI Recommendation 2B.6 to redefine the labels for White and Yellow findings (closed and accepted)
- NEI Recommendation 4C to improve communications during the dispositioning of findings (closed with the recently implemented Inspection Finding Resolution Management process)
- NRC staff Recommendation 153 to eliminate White findings (closed with no action)
- NRC staff Recommendation 278 to expand credit for self-identification and provide incentive for stronger audit programs (closed with ongoing effort to explore credit for licensee self-assessments in the inspection area)
- NRC staff Recommendation 337 to have only non-escalated and escalated issues and raise the greater-than-Green SDP threshold (closed with no action)

- NRC staff Recommendation 339 to only consider performance deficiencies in the past three years for inclusion in the assessment process, add a weighting factor to NRC-identified issues, and not include licensee-identified greater-than-Green issues in the Action Matrix (closed with no action)
- NRC staff Recommendation 340 to eliminate the cornerstone concept in the Action Matrix (closed with no action)
- NRC staff Recommendation 618 to reduce the level of effort on White findings and limit detailed risk evaluations when an initial review shows risk is less than E-6 (closed with Recommendation 2B.6, ongoing effort to improve more-than-minor screening guidance, and the Inspection Finding Resolution Management process)
- NRC staff Recommendation 627 to reduce resources spent on items of very low safety significance (closed with ongoing efforts to improve more-than-minor screening guidance, streamline inspection report generation, and recently implemented changes to the cross-cutting area guidance)
- NRC staff Recommendation 839 to eliminate White findings (closed with no action)
- NRC staff Recommendation 842 to eliminate White findings and increase the greater-than-Green SDP threshold (closed with no action)

The staff then briefly discussed recommendations that were still under evaluation.

The industry confirmed that NEI Recommendation 4D, which is a suggestion to standardize the issue escalation process, was an action for the industry to develop guidance that would be discussed at ROP public meetings later in the spring or summer 2019. NRC staff Recommendation 250 was still open for internal deliberations on whether the SDP as currently implemented correctly balances qualitative and quantitative considerations in a risk-informed manner.

The NRC staff discussed Recommendation 2B.1, in which the industry proposed to combine Columns 1 and 2 of the Action Matrix. The industry provided a proposed revised Action Matrix concept (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19016A368) to address this and other recommendations at the January 17, 2019, ROP public meeting. The staff reviewed the proposed changes and discussed them at this March 7, 2019 meeting:

- Industry proposal to label both Columns 1 and 2 “normal regulatory performance” and modify the Column 1 description to include “high regulatory performance” and the Column 2 description to include “good regulatory performance.” The staff does not agree with this proposal. The ROP basis, starting with SECY-99-007, “Recommendations for Reactor Oversight Process Improvements,” dated January 8, 1999, and continuing to the current basis documented in IMC 0308, “Reactor Oversight Process Basis Document,” dated October 4, 2017, has always stated that the White performance band (Column 2) is a departure from normal or nominal performance. The staff believes the current basis for Action Matrix Columns remains sound.

However, the staff did agree that the Column descriptions could be reviewed to ensure the safety significance represented by each Column is clearly and accurately reflected. Review of the existing Column descriptions revealed an opportunity to ensure they match with the revised finding labels proposed for implementation in accordance with Recommendation 2B.6. As a result, the staff proposes the following modifications to the existing Column descriptions:

- Licensee Response Column: All Green assessment inputs; cornerstone objectives fully met with very low impact on overall safety performance
  - Regulatory Response Column: One or two White assessment inputs in a strategic performance area; cornerstone objectives met with low impact on overall safety performance
  - Degraded Performance Column: One degraded cornerstone (three or more White inputs or one Yellow input), or three White inputs in any strategic performance area; cornerstone objectives met with moderate impact on overall safety performance
  - Multiple/Repetitive Degraded Cornerstone Column: Repetitive degraded cornerstone, multiple degraded cornerstones, multiple Yellow inputs, or one Red input; cornerstone objectives met with longstanding uncorrected issues or a significant impact on overall safety performance
  - Unacceptable Performance Column: Overall unacceptable performance; plants not permitted to operate within this band; unacceptable impact on overall safety performance
- Industry proposal to make an editorial change to the description of Column 3 to clarify that a degraded cornerstone is three White findings in a single cornerstone, and that a degraded cornerstone is not to be declared when any three White inputs occur across cornerstones. The staff reviewed IMC 0305, "Operating Reactor Assessment Program," dated June 21, 2018, and determined that a degraded cornerstone is clearly defined as having three White inputs or one Yellow input. The existing and proposed Column 3 description also includes the language, "One degraded cornerstone (3 or more white inputs or 1 Yellow input)," which clearly indicates that a degraded cornerstone is three White inputs or one Yellow input. The Degraded Performance Column (Column 3) can also be entered based on three White inputs in any strategic performance area. The staff does not find that further clarification is needed.
  - Industry proposal to change the current level of management involvement for regulatory performance meetings and public stakeholder involvement from the Branch Chief or Division Director to just the Branch Chief, and assessment letter signature from the Division Director to the Branch Chief. The staff does not support these proposed changes. The staff changed the definition of Column 3 within the past several years to require three White inputs rather than two White inputs, or one Yellow input. As a result, the range of performance represented by Column 2 expanded. For this reason, the staff finds it appropriate to maintain flexibility in the level of management engagement for plants in Column 2. Additionally, the existing framework for management involvement

provides gradual escalation across the Action Matrix: Branch Chief in Column 1, Branch Chief or Division Director in Column 2, Regional Administrator in Column 3, and Executive Director for Operations or deputy in Column 4. Removing the flexibility to involve the Division Director for Column 2 plants would result in a substantial increase in management involvement from Column 2 to 3.

- Industry proposal for a less than discrete border between Column 1 and 2: The staff does not support blurring the line between Columns 1 and 2. White inputs that result in movement to Column 2, while indicative of performance that remains acceptable, have been considered departures from nominal or normal performance since the development of the ROP. In fact, Columns 1, 2, 3, and 4 define performance as acceptable to continue operating safely. The recent change to the definition of Column 3 to require three White inputs has resulted in a wider range of performance within Column 2. The staff does not support blurring the line between plants with all Green inputs and plants with multiple White inputs.
- Industry proposal to eliminate the Column 2 expectation for external stakeholder involvement with State governors: The staff agrees that this is an unnecessarily high level of expected outreach but believes that some level of outreach with State, local, and Tribal governmental partners is appropriate. Regional offices have existing relationships and routine communications with governmental partners, and the staff believes it is appropriate to leverage such relationships and existing communications protocols for Column 2 plants. Thus, the staff proposes to remove “State Governors” from the external stakeholder Column 2 expectation and replace it with “outreach to State, local, and Tribal officials based on established protocols.”

Other proposed Action Matrix changes involved recommendations in the inspection area of ROP enhancement.

The NRC staff then briefly discussed its proposed dispositioning of NEI Recommendation 2B.5, which is a suggestion to close White findings upon determination by a supplemental inspection that the issues have been resolved. The staff previously discussed support for the concept of closing greater-than-Green findings once a supplemental inspection has determined the issues have been adequately addressed. The staff also discussed the proposed change to treatment of greater-than-Green performance indicators in detail at prior public meetings. In general, the proposal is to maintain a greater-than-Green assessment input open from the time a greater-than-Green performance indicator is submitted to the time a supplemental inspection determines the issues have been addressed, consistent with inspection findings. This change would also be consistent with the proposed removal of the four-quarter requirement for inspection findings, in that a greater-than-Green performance indicator assessment input would be closed when a supplemental inspection determines the issues have been addressed, even if the performance indicator occurrences have not yet rolled off and still drive the indicator greater than Green. The staff finds that this change will result in greater consistency, clarity, and predictability in the assessment process, and would provide an incentive for timely and effective corrective action for greater-than-Green findings and PIs.

### **Reactor Oversight Process Inspection**

The NRC staff discussed the overview of the preliminary SECY input. The staff discussed that SECY-18-0113, “Recommendations for Modifying the Reactor Oversight Process

Engineering Inspections,” dated November 13, 2018, is covering Recommendations 428 and 186. Recommendations 615, 308, 146, 176, 436, and 574 are considered complete under the Inspection, Scheduling, Tracking, and Reporting (ISTAR) effort. For NEI Recommendation 1F, to refrain from expanding the baseline inspection effort in the future, the NRC staff discussed enhancing guidance in IMC 2515, “Light-Water Reactor Inspection Program—Operations Phase,” dated March 28, 2017. For NEI Recommendation 2B.2 and NRC staff Recommendation 617, with regard to the enhancement of Inspection Procedure (IP) 95001, “Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area,” dated August 24, 2016, the NRC staff noted that a revision of the IP is out for regional comment, with a revised range in inspection hours. For NRC staff Recommendation 624, the staff discussed that the NRC is proposing guidance for resident inspectors to be away from the site for 5 days for resident inspector counterpart seminars. NEI Recommendations 1D, and NRC staff Recommendations 583, 375, 622, 231, 203, 613, and 266 have one proposed resolution, for which the staff is revising the following IPs for samples and hours:

- 71111.01, “Adverse Weather Protection”
- 71111.04, “Equipment Alignment”
- 71111.05, “Fire Protection”
- 71111.06, “Flood Protection Measures”
- 71111.13, “Maintenance Risk Assessments and Emergent Work Control”
- 71111.18, “Plant Modifications”
- 71111.19, “Post-Maintenance Testing”
- 71111.22, “Surveillance Testing”

With regard to NEI Recommendations 1E, 2B4 and NRC staff Recommendation 78 for changes to IP 71152, “Problem Identification and Resolution,” dated February 26, 2015, the staff discussed that Division of Inspection and Regional Support management is considering revising the frequency of the inspection. For NEI Recommendation 2B.3, to redirect IP 95001 to be triggered for Yellow or Red findings, the staff does not recommend any changes because the staff concluded that the Action Matrix and associated actions via IP 95001; IP 95002, “Supplemental Inspection for One Degraded Cornerstone or any Three White Inputs in a Strategic Performance Area”; and IP 95003, “Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs or One Red Input,” are adequate.

### **Independent Spent Fuel Storage Installation Inspection**

The NRC staff provided a brief status update on the recommendation related to ISFSI inspections, explaining that, as written, it will be rejected, and that the NRC will continue to perform ISFSI inspections. The staff also summarized the SECY paper input, which states that the NRC is developing a plan to evaluate the current ISFSI inspection program and propose

recommended changes to the program, if necessary. Similar to the previous ROP public meeting, NEI mentioned its desire to have an inspection model similar to that in Region II, in which the NRC resident inspectors completes the ISFSI-related inspection activities. The NRC staff plans to have further interactions with the regions and external stakeholders later this year.

### **Mitigating Systems Performance Index Area**

The NRC staff discussed each of the recommendations binned in the MSPI thematic area. The staff noted that IMC 0608, "Performance Indicator Program," dated February 5, 2009, outlines a process for significant changes to the performance indicator program. This is a lengthy process, and changes would likely require Commission approval.

At the January 17, 2019, ROP public meeting, the industry presented a high-level discussion of early thinking on a proposed replacement. Further development continues, and detailed discussions will occur once more details on the proposed replacement performance indicator concept have been developed. The industry also identified a possible early opportunity to cease the reporting of baseline and actual planned unavailability under the current MSPI performance indicators. The staff is continuing its review of this proposal.

NRC staff Recommendation 171 was submitted to establish performance indicators that measure licensee probabilistic risk assessment metrics. The staff believes this overlaps the risk-informed MSPI performance indicators and the early concept of an MSPI replacement. Therefore, is closing Recommendation 171 and it will be covered under Recommendation 1G.

NRC staff Recommendation 587 suggests a reevaluation of the existing performance indicators. Through work on the full complement of ROP enhancement recommendations, a reevaluation of the full suite of ROP performance indicators has essentially occurred. As discussed below, a number of proposed performance indicator changes have been recommended and will be assessed in accordance with the guidance in IMC 0608, Section 09.03.c, on significant changes to the performance indicator program:

- Initiating Events Performance Indicators: The staff views the existing performance indicators as appropriate and is not proposing changes.
- Mitigating Systems Performance Indicators: The industry is proposing changes in accordance with Recommendation 1G. At the January ROP public meeting, the industry raised a possible short-term change to remove planned unavailability as an input to MSPI. The staff is currently reviewing this short-term proposal. Longer term changes may be more comprehensive, including a possible total replacement of the MSPI.
- Barrier Integrity Performance Indicators: The staff views the existing performance indicators as appropriate and is not proposing changes.
- Radiation Protection Performance Indicators: Changes are being proposed by the staff as a result of the review of Recommendation 1A (to revise the ROP inspection program). The staff is considering adjusting the occupational radiation safety performance indicator to add an aspect that would track as low as reasonably achievable (ALARA) performance, and the ALARA planning and controls would be retired as an inspectable area in the baseline program. The performance indicator would provide a leading

indicator for degradation in ALARA performance and also a data stream for making future oversight decisions in this area.

- **Emergency Preparedness Performance Indicators:** Changes are being proposed by the NRC staff as a result of the review of Recommendation 3A and a focused self-assessment of the emergency preparedness SDP. Ideas 2.B and 2.C of the focused self-assessment report (ADAMS Accession No. ML18331A374) include details.
- **Security Performance Indicators:** The staff views the existing performance indicators as appropriate and is not proposing changes.

The changes discussed above are proposals for consideration. The staff will evaluate them in accordance with IMC 0608 guidance and determine whether to accept and implement the proposed performance indicator changes.

### **Emergency Preparedness**

The NRC staff provided an update on the status of the emergency preparedness (EP) SDP recommendations from the EP SDP focused self-assessment (ADAMS Accession No. ML18331A374), which included a preliminary summary of the EP input into the first, of potentially several, SECY papers related to proposed changes to the EP SDP. The staff answered questions related to the scope of EP SDP changes proposed as part of the ROP enhancement project. The staff also informed meeting participants that all issues related to possible changes to the EP SDP, including input into the SECY paper, is to be considered preliminary and is still being evaluated/finalized.

### **Radiation Protection**

The NRC staff provided the results of its analysis of the IPs used for oversight of the radiation safety cornerstones. The staff focused its review on changes that could be made to oversight in the areas of radiation monitoring instrumentation, radioactive effluents, and ALARA based on industry performance and use of licensee self-assessments. The staff concluded that there is currently insufficient data on the topic of self-assessments of radiation protection programs upon which to draw justifiable conclusions; therefore, it would be premature to pursue crediting self-assessments in lieu of inspections at this time. As a result, the staff concluded that changes in the areas of radiation monitoring instrumentation and radioactive effluents based on self-assessments would not be pursued. However, the staff expressed interest in possibly developing a methodology for crediting self-assessments in cooperation with external stakeholders in the future. The staff will revisit changes to these areas from a licensee performance perspective during the normal course of inspection program updates. The staff determined that reductions in the area of ALARA oversight are justifiable based on persistently low industrywide collective radiation exposure and individual required monitoring results as described in NUREG-0713, "Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities." Therefore, the staff will pursue reductions in this inspection area. Finally, in spring 2019, the staff will review and update the radiation safety inspection procedures (IP 71124, "Radiation Safety—Public and Occupational," dated December 21, 2017) and will solicit external stakeholder input as part of that effort.

**Security**

The staff informed industry that there were no current updates for this topic. However, the staff will continue to discuss future activities during regular ROP monthly meetings.

**Commission Paper Development**

NRC staff provided an overview of the general structure of the Commission paper being developed for submittal in June 2019. The paper will consist of the main body containing staff proposals that need either Commission approval or notification, thematic-based enclosures to the paper that contain supporting information for the main body of the paper, completed actions and other longer term actions, and other enclosures that contain data driven analyses supporting changes requiring Commission approval. In addition, the staff explained that all the recommendations made to enhance the ROP and the staff's resolutions and or status of the recommendations will be presented in a publically available memorandum and referenced in the main body of the Commission paper.

**Reactor Oversight Process Performance Indicator Program Frequently Asked Questions (FAQs)**

On February 5, 2019, the NRC staff issued a revision to IMC 0608 to include specific guidance on the FAQ process for licensees that are not members of NEI. This revision is available on the NRC's public Web site (<https://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/index.html>).

**Conclusion**

At the end of the meeting, NRC and industry management gave closing remarks. Both the NRC and the industry agreed to plan to conduct the next ROP public meeting on March 27, 2019, so that NRC management and staff can meet with senior industry representatives, NEI executives, and members of the public to further inform stakeholders on the recommendations that the staff will present to the Commission to enhance the ROP.

SUBJECT: SUMMARY OF THE REACTOR OVERSIGHT PROCESS MONTHLY PUBLIC MEETING ON MARCH 7, 2019

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**LIST OF ATTENDEES**

**REACTOR OVERSIGHT PROCESS MONTHLY PUBLIC MEETING**

**March 7, 2019, 8:30 AM to 4:30 PM**

**NRC One White Flint North  
Commission Hearing Room  
11555 Rockville Pike  
Rockville, MD**

<u>Name</u>	<u>Organization</u>
1. David T. Gudger	Exelon
2. Ho Nieh	NRC
3. Bruce Mrowca	ISC
4. Chanel Stridiron	OIG
5. Roy Linthiaum	PWROG
6. Jeffery Mitman	NRC
7. Larry Parker	Star Alliance
8. Maggie Staiger	NEI
9. Mike Murray	STPEGS
10. Steve Campbell	NRC
11. Erin Henderson	TVA
12. Tony Zimmerman	Duke Energy
13. Chris Earls	NEI
14. Deann Raleigh	Curtiss Wright
15. Robert Krsek	NRC
16. Mike Montecalvo	NRC
17. Russell Gibbs	NRC
18. Tom Hipschman	NRC
19. William Orders	NRC

20. Jimi Yerojum	NRC
21. James Slider	NEI
22. Daniel Merzke	NRC
23. Kevin Hsueh	NRC
24. David Aird	NRC
25. Billy Dickson	NRC
26. Don Helton	NRC
27. CJ Fong	NRC
28. Amy Hardin	NRC
29. Ken Kolaczyk	NRC
30. Tekia Govan	NRC
31. Ami Agrawal	NRC
32. Eric Thomas	NRC
33. Alonzo Richardson	NRC
34. Carla Roque Cruz	NRC
35. Chris Miller	NRC

Participated via conference line

36. Alex Garmoe	NRC
37. Mary Anderson	NRC
38. Steve Catron	NextEra
39. Geoffrey Catron	NRC
40. Mohammed Shuaibi	NRC
41. Christopher Cahill	NRC
42. Rob Burg	Engineering Planning and Management
43. Derek Widmayer	NRC
44. Alison Brown	NextEra Energy

- |                              |                      |
|------------------------------|----------------------|
| 45. James Hegger             | Duke Energy          |
| 46. Robin Ritzman            | FENOC                |
| 47. Joylynn Quinones-Navarro | NRC                  |
| 48. Ron Gaston               | Entergy              |
| 49. Jonathan Laplante        | Entergy              |
| 50. Carlos Sisco             | Winston & Strawn LLP |