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May 20, 2019

Mr. Ho K. Nieh  
Director, Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Subject:** Proposed SECY on ROP Enhancement

**Project Number: 689**

Dear Mr. Nieh:

For the past year, the Nuclear Energy Institute (NEI)<sup>1</sup> and its members have discussed with the Nuclear Regulatory Commission's (NRC) staff potential enhancements to the Reactor Oversight Process (ROP) in the spirit of NRC Transformation.<sup>2</sup> We appreciate the effort that the NRC has put into this first phase of ROP Enhancement. This has included reviewing approximately 100 recommendations to improve the ROP received from internal and external stakeholders.<sup>3</sup> These recommendations flow from two facts:

1. In nearly 20 years of experience with the ROP, both the NRC and the industry have gained many insights on what is working well in the ROP and what could be improved. Some have been addressed through the NRC's annual self-assessments of the ROP.<sup>4</sup> Others through occasional, broader reviews of parts of the ROP, such as the review of the Baseline Inspection Program in 2013.<sup>5</sup> The current ROP Enhancement project is one of the most comprehensive reviews of the ROP ever launched by the NRC.
2. By almost any measure, the U.S. nuclear industry is performing at record levels of safety, reliability and efficiency, well surpassing the levels extant at the founding of the ROP, which influenced the

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<sup>1</sup> The Nuclear Energy Institute (NEI) is responsible for establishing unified policy on behalf of its members relating to matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry.

<sup>2</sup> SECY-18-0060, "Achieving Modern Risk-Informed Regulation", May 23, 2018, ADAMS ML18110A187.

<sup>3</sup> NEI submitted 27 of those recommendations in a letter from Mr. Bill Pitesa (NEI) to Mr. Ho K. Nieh (NRC), "ROP Enhancement", September 19, 2018, ADAMS ML18262A322.

<sup>4</sup> Available at URL: <https://www.nrc.gov/reactors/operating/oversight/program-evaluations.html#section1>

<sup>5</sup> "Effectiveness of the Reactor Oversight Process Baseline Inspection Program", 78 FR 35056, June 11, 2013.

formulation of the ROP performance indicators and inspection program. In terms of operating safety, for example, the industry average core damage frequency today is about a factor of five better (lower) than its value at the beginning of the ROP,<sup>6</sup> reflecting improvements in safety achieved through plant and procedure modifications based on risk insights and operating experience. In terms of regulatory performance, the industry today is achieving unprecedented numbers of plants maintaining all green performance indicator values and judged by the NRC as belonging in Column 1 in the Action Matrix.<sup>7</sup>

These facts frame our mutual interest in recalibrating the ROP to reflect the improvement in fleet performance, technology and techniques for effective oversight. Both the industry and the NRC must ensure that our combined resources, including those utilized in the ROP, are focused on what matters most to protecting public health and safety and security.

In a series of public meetings with the NRC this year,<sup>8</sup> NEI's recommendations and priorities for optimizing the ROP were discussed. In a March 27 public meeting and an April 24 public call, the staff provided a high-level description of ROP Enhancements expected to be included in a forthcoming proposal (SECY paper) to be submitted to the Commission by June 30, 2019. NEI's knowledge of the contents of the SECY is limited to descriptions the staff has shared in these public meetings. From what the staff has shared, NEI expressed concerns about certain elements during the March 27 meeting and the April 24 call. To ensure the record is clear, a written summary of key comments provided in those public settings is attached. It is our hope that the NRC staff will consider the comments as the draft SECY proceeds through internal reviews and concurrences and will include them in the portion of the SECY in which the staff intends to summarize stakeholders' views for the Commission's consideration.

A particular concern about the staff's proposal is a change in how the NRC closes a white performance indicator.<sup>9</sup> As explained in the attachment, the proposal:

- Appears to be aimed at an infrequent circumstance<sup>10</sup> that can be addressed through existing features of the ROP.
- Does not offer the "... thorough, data-driven analysis that clearly identifies the program performance issues that need to be addressed"<sup>11</sup> required by the Commission.

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<sup>6</sup> NEI analysis based on Electric Power Research Institute (EPRI) data.

<sup>7</sup> In the most recent display of performance indicator data on the NRC website (1Q2019, updated April 23, 2019, retrieved May 10, 2019), only two units of the 98 operating had any greater-than-green values, and those two units each had only one, a white performance indicator. Taking the 17 performance indicators listed for each of the 98 units in operation, this amounts to 99.9% of performance indicators being green. The NRC web page showing Action Matrix summary data (retrieved May 17, 2019, last updated May 14, 2019) shows 92 units in Column 1 and six units in Column 2 of the Action Matrix.

<sup>8</sup> The most recent four public meetings featuring ROP Enhancement were held on January 17, March 7, March 27, and April 24, 2019.

<sup>9</sup> Briefly, the proposal is to open a parallel white finding that would remain as a white input to the Action Matrix until the supplemental inspection is completed. Per the original design of the ROP, a white performance indicator reverts to green (i.e., the white PI input to the Action Matrix ends) according to the value of the indicator, not the status of the supplemental inspection.

<sup>10</sup> The circumstance of a supplemental inspection for a white PI that is not completed within four quarters following the occurrence.

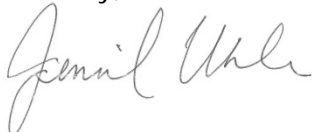
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- Does not recognize a fundamental difference in the “significance profile” of a white performance indicator compared to a white finding. When a white indicator returns to green, the indicator itself provides objective evidence that the change in risk present while the indicator was white no longer exists. For a white finding, the objective evidence must await completion of the 95001 supplemental inspection. Given this difference, retaining the white performance indicator’s input to the Action Matrix until the supplemental inspection is completed, as the staff proposes, erroneously extends the period in which the risk significance of the white indicator contributes to the Action Matrix results.

NEI urges the staff to reconsider the proposal for changing the treatment of white performance indicators and withhold it from the June ROP SECY to allow further discussion and analysis with external stakeholders.

If you have any questions on these comments, please contact the lead staff member on ROP Enhancement, Jim Slider, at (202) 739-8015 or [jes@nei.org](mailto:jes@nei.org), or me.

Sincerely,



Jennifer L. Uhle

Attachment

c: Margaret Doane, EDO, NRC  
Christopher G. Miller, D/DIRS, NRC

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<sup>11</sup> Memorandum to Victor M. McCree, Executive Director of Operations, from Rochelle C. Baval, Acting Secretary, NRC, Reference M160602B, “Staff Requirements Memorandum – Briefing on Results of the Agency Action Review Meeting (AARM), 9:00 A.M., Thursday, June 2, 2016 ...,” ADAMS ML16176A078.

## Attachment NEI Comments on ROP Enhancement

The NRC staff is developing a proposal to the Commission requesting approval of changes to the Reactor Oversight Process (ROP). Based on briefings provided by the staff in recent public meetings, NEI offers the following comments on the proposed changes. The purpose of these comments is to make clear our understanding of the staff's proposal, and determine where NEI and its members are aligned with the NRC on the proposed changes and where we are not. It is our hope that the staff will consider these comments as they review and further refine their proposal on ROP Enhancement. We ask that these comments be included in the staff's discussion of stakeholder views for the Commission's consideration in the June ROP SECY. The discussion of our comments below follows the order in which topics were listed in the staff's March 27 presentation on ROP Enhancement recommendations.<sup>1</sup>

### Theme 1 – NRC Response to White Findings<sup>2</sup>

#### "Press Release Guidance for White Findings"

We had recommended that the NRC should discontinue the practice of issuing a press release for white findings.<sup>3</sup> The press release gives external stakeholders a misleadingly elevated impression of greater safety significance than the white finding actually presents. Our recommendation was based on experience in dealing with stakeholders needlessly alarmed by the receipt of an NRC press release for a white finding of low safety significance. In addition, we noted that the NRC was inconsistent in issuing a press release for white findings.

We understand that personnel from the Office of Nuclear Reactor Regulation (NRR) reviewed the recent history of press releases issued for white findings and agreed with our conclusion that the NRC has been inconsistent in these issuances. We further understand that NRR personnel have discussed with the NRC's Office of Public Affairs (OPA) the agency's practice of issuing a press release following issuance of a white finding. The upshot was a renewed understanding that OPA does not automatically issue a press release in these cases, but retains the discretion to do so as the particular circumstances might warrant. Those circumstances include such things as the plant involved, the plant's operating history and locale and the nature of the white finding. We believe it is important to preserve the above understanding in a more durable form.

In our oral remarks at the March 27 meeting, we suggested that language in the NRC's Enforcement Manual<sup>4</sup> might be driving some of the inconsistency we have seen in the issuance of press releases for white findings:

- Section 1.2.18.C of the Enforcement Manual indicates that a press release is "... not normally issued for escalated NOV's [Notices of Violation] proposed without a civil penalty." [Emphasis added]

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<sup>1</sup> Staff presentation entitled, "Reactor Oversight Process: ROP Enhancement Project Update," presented at an ROP public meeting on March 27, 2019. PDF available in ADAMS under accession number ML19086A122.

<sup>2</sup> *Ibid*, page 13. Staff presentations have been organized around three "thematic areas": Response to White Findings, Baseline Inspection Program, and Significance Determination Process.

<sup>3</sup> Recommendation 2A in Enclosure 1 of our September 29, 2018 letter [Mr. Bill Pitesa (NEI) to Mr. Ho K. Nieh (NRC), "ROP Enhancement," September 19, 2018, ADAMS ML18262A322].

<sup>4</sup> NRC Enforcement Manual, ADAMS ML18018B134.

- Section 1.2.18.D indicates that “OPA may choose to issue a press release for escalated NOV associated with an SDP finding.” [Emphasis added]

The use of the words “may choose” in §1.2.18.D contrasts with the words “not normally issued” in §1.2.18.C. This implies that while it is not normal to issue a press release for an escalated NOV without a civil penalty, it would not necessarily be abnormal to issue a press release for an escalated NOV associated with an SDP finding.

This wording, in our view, is inconsistent with the significance of the violations to which the language would apply, particularly in the case of a violation associated with a white SDP finding. For instance, the lowest level of escalated enforcement in traditional enforcement is a Severity Level III violation. This is defined in §2.2.2.C of the Enforcement Policy as a violation that resulted in or could have resulted in moderate safety or security consequences. Per the language of §1.2.18.C of the Enforcement Manual, a press release would not normally be issued, provided there was no civil penalty. A violation associated with a white finding would be characterized as having low safety or security consequences, yet the guidance in Enforcement Manual §1.2.18.D provides that a press release may be issued.

We recommend that the NRC make the wording of §1.2.18.D congruent with that of §1.2.18.C. As advised by the NRR, we intend to follow up publicly with the NRC’s Office of Enforcement and the Office of Public Affairs to seek clarification or revision of the language in the Enforcement Manual. We believe this would provide a more durable solution than the verbal dialogue we understand that NRR has had with OPA to this point.

“White and Yellow Finding Labels to Low and Moderate Significance ... and Conforming Changes to Action Matrix ...”

We recommended several changes to the Action Matrix in our September 19, 2018, letter.<sup>5</sup> Later, in January 2019, we submitted a mark-up of the Action Matrix showing how all of our recommended changes would work together.<sup>6</sup> We developed our recommended changes as an integrated whole. The focus of our recommended changes to the Action Matrix was to help the agency optimize its response to low safety significance issues, such as a white input to the Action Matrix. By addressing low safety significance issues with a level of resources and timeliness commensurate with their low safety significance, the changes we proposed would preserve NRC resources and attention for more significant issues.

We hoped that the NRC staff would consider our changes in an integrated manner or perform their own holistic review of the Action Matrix. We strongly encourage the staff to look at our recommendations as a whole with the goal of producing an Action Matrix that clearly and consistently communicates the low safety significance of white findings and guides an NRC response that is appropriate to that low safety significance.

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<sup>5</sup> *Op. cit.*, Enclosure 1, Recommendations 2B, 2B.1, 2B.2, and 2B.6.

<sup>6</sup> NEI’s proposal, in the form of a mark-up of the Action Matrix enclosed in NRC Inspection Manual Chapter 0305, was provided to the NRC staff on January 16, 2019, and discussed at the ROP public meeting on January 17, 2019. See ADAMS ML19016A368.

In the March 27 public meeting, the staff mentioned that they would adjust the labeling of white and yellow findings to “low safety significance” and “moderate safety significance,”<sup>7</sup> respectively, and adjust the labeling of Action Matrix Columns 1 and 2 accordingly. These changes would, in our view, better communicate the low safety significance of white findings than the ambiguous “range” label<sup>8</sup> currently in use. Although some critics have said the proposed change in the labeling of white findings is “silly,” we disagree. Industry experience with the NRC response to white findings confirms the importance of using terms that accurately describe the safety significance of whatever the NRC communicates to the public. When the NRC’s choice of words gives a misleading impression of greater safety significance, the public is needlessly alarmed and other local, regional and financial stakeholders may be unduly concerned with the impact on plant operations and cost of recovery.

We understand the staff intends to clarify the communications expected to follow the issuance of white findings. We had commented that requiring the NRC to notify state governors when a white finding is issued was excessive for the low safety significance involved. We understand the staff may revise this element of the Action Matrix to call for notifying the state liaison officer in lieu of the governor. This would be more in line with the low safety significance of a white finding.

#### “Supplemental Inspection for White Findings”

We understand the NRC intends to review lessons learned from use of the supplemental inspection procedure (IP) 95001.<sup>9</sup> As we heard in NRC and industry remarks in the April 24 public call, the impact of this inspection on NRC and licensee resources has grown over the years. Whether measured in terms of inspection hours, management attention, or dollars, the impacts on the NRC and the industry are significant and can detract from safety.<sup>10</sup>

We applaud the agency’s decision to review NRC and industry experience with the supplemental inspection procedure. We urge the NRC to consider a revision that allows tailoring of the scope and effort necessary for the supplemental inspection according to the nature of the white finding involved. For a very straightforward and isolated finding promptly corrected by the licensee, for example, a minimum scope and level of effort—perhaps performed entirely by the site resident inspectors—ought to suffice. For more complicated situations, we understand that a more significant supplemental inspection effort could be needed. It is important to recognize this range of possibilities and provide the flexibility necessary to tailor the inspection to the unique circumstances of each white finding. We request that the NRC engage with public stakeholders, including NEI, during the agency’s review of IP 95001 to find ways of making the inspection more efficient and effective for both the NRC and the industry.

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<sup>7</sup> *Op. cit.*, Enclosure 1, Recommendation 2B.6.

<sup>8</sup> Per NRC Inspection Manual Chapter 0609, Section 04.02, green findings are described as “very low safety significance,” white findings are “low to moderate safety significance,” yellow findings are “substantial safety significance,” and red findings are “high safety significance.”

<sup>9</sup> NRC Inspection Manual, Inspection Procedure 95001, “Supplemental Inspection Response to Action Matrix Column 2 Inputs,” Issued August 24, 2016, ADAMS ML15223B348.

<sup>10</sup> At the March 27, 2019, public meeting, PSEG Chief Nuclear Officer, Peter Sena, told the staff that company resources spent for preparing and completing a typical IP 95001 inspection amount to about \$1 million. Mr. Sena also mentioned that the inspection preparations and response consume management attention that would be better spent focusing on safety. This is consistent with anecdotal information from other licensees gathered by NEI over the past decade.

### “Four Quarter Requirement for GTG Findings”

We understand the NRC intends to propose to the Commission that the white input to the Action Matrix due to a white finding be closed as soon as the supplemental inspection (IP 95001) is passed. The status quo, as described in NRC Inspection Manual Chapter 0305, Section 11.01b, retains the white input at least four quarters, even if the performance deficiency is corrected and the supplemental inspection is passed in less time. The industry supports the staff’s proposal as it was described orally at the March 27 public meeting and affirmed in the staff’s remarks in the April 24 public call. The change would further encourage licensees to address a white finding promptly.

### “Option to Revise Treatment of GTG PIs”

We understand the staff intends to offer the Commission an option to change the treatment given to greater-than-green performance indicators. The staff described their proposal as opening a parallel white finding when a performance indicator crosses the green-white threshold. This parallel finding would remain open as an input to the Action Matrix until the IP 95001 supplemental inspection is passed. At present, the white PI input to the Action Matrix follows the actual value of the performance indicator, quarter by quarter, so that the white PI input reverts back to green when the PI value returns to green.<sup>11</sup> The NRC’s proposal would “lock in” the white PI input until the supplemental inspection is passed.

Thus far, our knowledge of the staff’s proposal is based on the staff’s oral description of this proposal at the March 27 meeting, in the April 24 public call, and in a set of presentation slides shared publicly just prior to the April 24 call.<sup>12</sup> The staff has not provided a whitepaper or other detailed analysis to support its proposal.<sup>13</sup> The staff has offered two rationales for the proposal. One is to address past instances in which the supplemental inspection was not passed within four quarters of the PI crossing the green-white threshold. The other is to make the treatment of white PIs consistent with the treatment of white findings (i.e., that both remain white inputs to the Action Matrix until the supplemental inspection is passed).

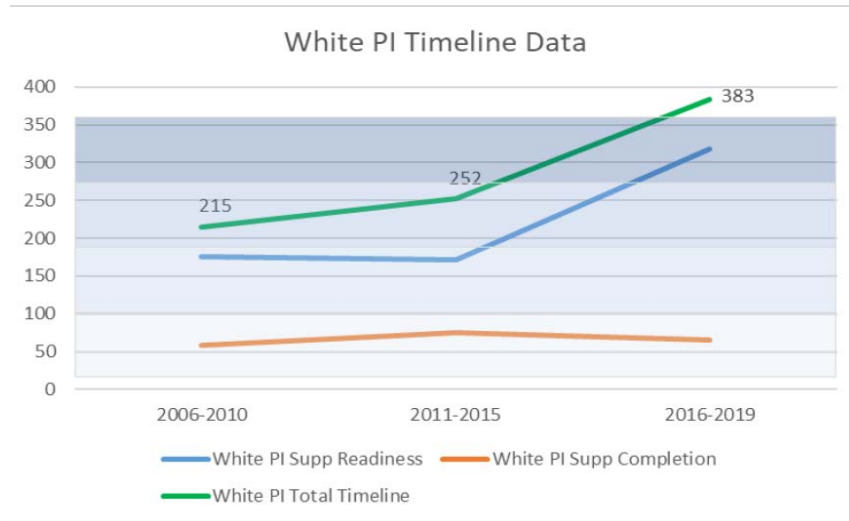
In oral remarks, the staff expressed concern about a rising trend in the length of time taken to close a white performance indicator. The trend is depicted in the graph below, taken from slide 14 in the staff’s April 24 presentation package.

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<sup>11</sup> As described in Inspection Manual Chapter 0305, Section 11.02.a.3 (IMC 0305, Issue Date 06/21/18, ADAMS ML18059A337, page 29).

<sup>12</sup> Just prior to the April 24 public phone call on ROP Enhancement, the staff released a presentation describing the proposed change in performance indicator closure. The presentation provides a bit more information, but no greater analysis of the problem or implications than the staff’s oral remarks given on March 27. The presentation file is available in ADAMS under ML19107A491.

<sup>13</sup> The April 24 presentation file includes a high-level summary of GTG PI occurrences, but no data on individual occurrences, causes or response.



The graph shows a dramatic rise (52 percent) to 383 days to close a white performance indicator in the 2016–2019 interval. In our examination of the staff’s data, we note there has been an even more dramatic reduction (i.e., improvement) in the number of white performance indicators over the period of time shown in the NRC graph. In the interval 2006–2010, we counted 33 occurrences of a white PI in the staff’s dataset; 23 occurrences in the 2011–2015 interval, and only five occurrences in the 2016–2019 interval. The decline in the number of white PIs per interval should be recognized as a substantial improvement in licensee performance since the beginning of the ROP. In the face of this fleet-wide improvement, the staff asserts that a rise in the average number of days to close a white PI in a dataset of just five occurrences is a sufficient basis for the NRC to conclude there is a problem.<sup>14</sup> In our view, the apparent rising average is, at most, a sign that further study is needed (as we explain below, we see extenuating circumstances in the most recent instances). Thus, we do not see in the sparse data proof that a major change is needed in how white PIs are treated in the ROP.

The staff has also asserted that it should not take longer to close a white PI than to close a white finding. Yet, we know that performance indicators and inspection findings are fundamentally different inputs to the ROP, and the licensee and NRC response to both differs in important ways that are not captured in the staff’s metric of average days to closure.

For example, in the case of a white finding, the extensive dialogue between licensees and the NRC during the inspection and the significance determination process creates a shared understanding of the problem and potential solutions. In contrast, when a performance indicator goes white, the licensee and the NRC may not immediately share an understanding of the causes and corrective actions needed for the white indicator. When the indicator involves initiating events (e.g., unplanned scrams), it may take the licensee a

<sup>14</sup> The first two intervals encompass five years each; the most recent interval only three years of data (2016, 2017, 2018). To “normalize” the expected number of white PI occurrences in the most recent interval, we extrapolate from the number of occurrences in the first three years. Based on performance from 2016 to 2018, the year of the last white PI occurrence, we would estimate three additional white PIs will occur in 2019 to 2020, bringing the total in the five-year interval, 2016-2020, to eight white PI occurrences. Whether we count five or eight, the number in the most recent interval is less than a third of the total in the previous five-year interval.



substantial amount of time to identify the commonalities and appropriate corrective actions. This, in turn, extends the time needed to prepare for the supplemental inspection for a white performance indicator.

In one recent case, while the licensee was completing preparations for the supplemental inspection triggered by two occurrences counted in a performance indicator, a third occurrence arose. The licensee made the conservative choice to re-do the investigation of common causes to include all three occurrences. This extended the time needed to prepare for the supplemental inspection (the staff's stated concern behind the proposed change in treatment of white PIs). However, this was the right decision for the licensee to take for the cause of the white PI to be appropriately identified and fixed.

In another case, the circumstances in which the performance indicator went white raised questions about the proper interpretation of NEI 99-02. The licensee submitted an FAQ via the ROP Task Force, as appropriate in these circumstances. Review and adjudication of the FAQ took several months and correspondingly delayed the schedule for a supplemental inspection.

Another factor confounding the staff's simple interpretation of average days to closure is that NRC expectations<sup>15</sup> of the supplemental inspection have risen over time, as have the consequences to the licensee of failing a supplemental inspection. In response, the licensees' level of effort and time spent in preparing for the supplemental inspection have risen over time, as well.

In summary, the staff has highlighted what may be an adverse trend in the length of time taken to close white performance indicators. The industry sees a need to understand the data to determine if the reasons for the longer closure times were reasonable and determine if the data is statistically significant. At this time, NEI does not see in the data or analysis presented by the NRC thus far sufficient basis for changing the treatment of white performance indicators in the ROP. This is far short of the "... thorough, data-driven analysis that clearly identifies the program performance issues that need to be addressed"<sup>16</sup> required by the Commission.

## **Theme 2 – Baseline Inspection Program**

### "Optimize Baseline Inspection Program"

In the March 27 public meeting, the staff provided no details on changes in the Baseline Inspection Program (BIP) to be presented in the June SECY. The staff presentation offered four bullets to elaborate on the meaning of "optimize." Those bullets indicate the staff will adjust inspection samples and hours for numerous IPs, combine certain IPs (e.g., surveillance test and post-maintenance testing), modify ALARA inspection,<sup>17</sup> and change the frequency of problem identification and resolution (PI&R) team inspections to triennial. After the March 27 meeting and shortly before the April 24 public call on ROP Enhancement, the

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<sup>15</sup> Exemplified by an increase in the NRC's level of effort spent on the supplemental inspection, which the NRC acknowledged at the April 24 meeting.

<sup>16</sup> Memorandum to Victor M. McCree, Executive Director of Operations, from Rochelle C. Bovol, Acting Secretary, NRC, Reference M160602B, "Staff Requirements Memorandum – Briefing on Results of the Agency Action Review Meeting (AARM), 9:00 A.M., Thursday, June 2, 2016 ...," ADAMS ML16176A078.

<sup>17</sup> NRC Inspection Procedure 71124, Attachment 02, "Occupational ALARA [As Low as Reasonably Achievable] Planning and Controls," Effective January 1, 2018, available in ADAMS at ML17286A285.

staff publicly released a presentation that further describes the proposed change in BIP procedures, albeit still in very general terms.<sup>18</sup> The changes are described in terms of the inspection samples and hours that may be reduced or increased under ROP Enhancement. We are led to believe the details will be spelled out in the June SECY. Pending receipt of those details, we cannot say whether we are aligned or not aligned with the staff's specific recommendations for changes in samples or hours. The general information available so far looks promising in terms of recalibrating the BIP based on learnings from the years of implementation experience, maturation of the industry and the NRC, and improvements in technology and techniques since the BIP was initially established.

Regarding the ALARA inspection, we believe this inspection is no longer adding value to public health and safety commensurate with the level of effort it requires. In a formal presentation to the NRC at a December 2018 public meeting, NEI provided the justification for substantial changes in the NRC's inspections of radiation protection, including the ALARA inspection, based on industry performance.<sup>19</sup> Thus, we were pleased to hear in the April 24 public call that the staff intends to recommend the ALARA inspection procedure for retirement based on a continuous decline in occupational exposure. We believe advancements in radiological monitoring and control technologies and the industry's outstanding radiological performance record warrant a holistic review of the entire suite of radiation protection inspection procedures. Our recommendation is that the radiation protection inspection suite review should be comparable in scope and depth to the holistic review of engineering inspection procedures performed from 2017–2018, not just a routine "recalibration."

Regarding the PI&R inspection, we applaud the staff's intent to recommend changing the frequency of the team inspection to triennial.<sup>20</sup> We understand the NRC intends to undertake a holistic review of the PI&R inspection in the next phase of the ROP Enhancement project.<sup>21</sup> Given the pivotal role of the PI&R inspection in the ROP, a holistic review of the PI&R inspection procedure makes a great deal of sense. We request that the NRC involve public stakeholders, including NEI and other industry participants, in that review.

### **Theme 3 – SDP Improvements**

#### "Risk-Inform the EP SDP ..."

The staff affirmed its intent to follow through on recommendations from the Focused Self-Assessment of the Emergency Preparedness SDP.<sup>22</sup> No additional information on this was provided in the March 27 meeting. We learned in the April 4 public call that the staff needs to further study the proposal we made to consider

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<sup>18</sup> Staff presentation, "Proposed Changes to Inspection for ROP Enhancement 4-24-19," shown on the NRC website at <https://www.nrc.gov/pmns/mtg?do=details&Code=20190286>, is available in ADAMS at ML19107A495.

<sup>19</sup> Industry presentation is available in ADAMS at ML18352A984. An NRC summary of the December 14, 2018, meeting on Radiation Protection inspection enhancements is available at ML18355A510.

<sup>20</sup> According to Slide #15 in the staff's March 27 presentation.

<sup>21</sup> According to Slide #18 in the staff's March 27 presentation.

<sup>22</sup> Memorandum from Michael L. Scott (DPR/NSIR) to Christopher G. Miller (DIRS/NRR), "Results of the Calendar Year 2018 Reactor Oversight Process Focused Self-Assessment on the Emergency Preparedness Significance Determination Process," February 1, 2019, ADAMS ML18331A374.

defense-in-depth in the EP SDP. We request that the NRC involve public stakeholders, including NEI and other industry representatives, in pursuing the recommendations presented in the FSA report.

“Incorporate IMC 0609, Appendix O (Mitigating Strategies SDP) into IMC 0609, Appendix A (At Power SDP)”

At the March 27 public meeting, the staff affirmed its intent to merge Appendix O<sup>23</sup> into Appendix A,<sup>24</sup> and to keep Appendix L<sup>25</sup> as a separate SDP for so-called “B.5.b”<sup>26</sup> equipment. In the March 7 and 27 meetings, NEI and other industry stakeholders protested the staff’s decision to merge Appendix O into Appendix A, rather than merge Appendix O and Appendix L into a single SDP for beyond design basis situations. By merging Appendix O into Appendix A, the staff blurs the important distinction between design basis and beyond design basis events. In our view, the equipment subject to the mitigating strategies SDP has more in common with equipment subject to B.5.b scenarios than with at-power scenarios governed by Appendix A. In addition, the staff has provided a technical basis for the B.5.b SDP (Appendix L) that indicates the gradations in significance are based on expert judgment. The staff has not provided a technical basis for the mitigating strategies SDP (Appendix O), however, given the similarity of its use to that of the B.5.b SDP, we would expect the basis to be similar (i.e., expert judgment). In our view, this is difficult to reconcile with the quantitative risk analysis that predominates the At Power SDP (Appendix A). Therefore, we disagree with the staff’s proposal to merge Appendix O into Appendix A.

### **Longer-Term Activities**

The staff identified seven items to be pursued in the next phase of ROP Enhancement.

1. Evaluate revisions to performance indicators

The primary discussion on this topic was related to our proposal to develop an alternative to the Mitigating System Performance Index (MSPI). We expect to provide our proposal to the NRC in late summer. We are also exploring nearer-term options to reduce the burden of MSPI data collection and reporting.

Staff mentioned additional interest in reviewing the entire set of ROP performance indicators to determine whether any should be revised or replaced, or any new indicators added. If this review is undertaken, it should be for the purpose of identifying opportunities to replace existing inspections with performance indicators. We request that the NRC involve public stakeholders, including NEI and other industry participants, in this review, if it is undertaken.

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<sup>23</sup> IMC 0609, Significance Determination Process, Appendix O, “Significance Determination Process for Mitigating Strategies and Spent Fuel Pool Instrumentation,” Effective October 7, 2016, ADAMS ML16277A415.

<sup>24</sup> IMC 0609, Significance Determination Process, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Effective July 1, 2012, ADAMS ML101400574.

<sup>25</sup> IMC 0609, Significance Determination Process, Appendix L, “B.5.b Significance Determination Process,” Effective December 24, 2009, ADAMS MLO93520169.

<sup>26</sup> “B5b” refers to section B.5.b of the NRC’s Interim Compensatory Measures Order, EA-02-026, dated February 25, 2002, which addressed the potential loss of large areas of a nuclear power plant due to explosions or fire.

## 2. Perform holistic review of PI&R inspections

As discussed in earlier sections of this letter, we support this idea and request that external stakeholders be publicly engaged in the staff's review.

## 3. Reevaluate the cross-cutting issues program

Staff proposes to examine experience with their cross-cutting issues (CCI) program<sup>27</sup> since the program was revised in 2014. The staff's remarks at the March 27 meeting indicate this examination is prompted by concern for the NRC's ability to respond to plants which the agency believes are low outliers among the population of plants judged as performing in Column 1 of the Action Matrix. We respect the NRC's desire and need to review experience with its programs periodically. In this case, however, since the staff's own analysis<sup>28</sup> showed that cross-cutting issues were not effective in revealing prospective declines in plant performance, we disagree with the rationale emphasized by the staff as justifying the CCI review. We believe the ROP already offers all the tools the NRC needs to address plants suspected to be low outliers within Column 1. Those tools include, among others, the Action Matrix deviation memo, the periodic assessment letters, the PI&R annual follow-up of selected issues, and several more. Our assessment of the "outlier problem" and the tools the NRC has to address it is available from NEI upon request.<sup>29</sup>

## 4. Optimize Independent Spent Fuel Storage Installation inspections

The staff has shared its rejection of our recommendation to eliminate the region-based materials inspection of ISFSIs and utilize the resident inspectors for ISFSI oversight. Instead, the staff indicated that they will review the two existing inspection procedures (Inspection Procedures 60855<sup>30</sup> & 60855.1<sup>31</sup>) and look for ways to optimize them. We believe that routine activities related to the ISFSI (e.g., heavy lifts, fuel moves, and physical inspection of the pads) could be done by the resident inspectors. We request that the NRC appropriately involve public stakeholders, including NEI and other industry participants, in this proposed review of ISFSI inspections.

## 5. Optimize radiation protection inspections

As discussed previously, we believe the NRC should undertake a holistic review of RP inspection procedures. We understand the staff presently intends to perform merely a routine biennial review of the RP inspection procedures. In our view, the industry's sustained and outstanding radiological performance provides a sound basis for recalibrating the entire RP inspection suite.

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<sup>27</sup> Cross-Cutting Issues are described in Section 0305-14 of NRC Inspection Manual Chapter 0305, Operating Reactor Assessment Program, Issued June 21, 2018, ADAMS ML18059A337.

<sup>28</sup> NRC memorandum from Daniel J. Merzke, Acting Chief, Performance Assessment Branch to Ho K. Nieh, Director, Division of Inspection and Regional Support, "Effectiveness Review of Substantive Cross-Cutting Issues," April 23, 2014, ADAMS ML14099A171.

<sup>29</sup> NEI Whitepaper, "The NRC's 'Outlier' Problem," James Slider, April 22, 2019, available at [jes@nei.org](mailto:jes@nei.org).

<sup>30</sup> Inspection Procedure 60855, "Operation of an Independent Spent Fuel Storage Installation," Issued January 16, 2008, ADAMS ML073100489.

<sup>31</sup> Inspection Procedure 60855.1, "Operation of an Independent Spent Fuel Storage Installation at Operating Plants," Issued September 5, 2006, ADAMS ML062440146.

6. Evaluate SDP infrastructure improvements

We understand the staff intends to review the SDP Phase I questions, the so-called "screen-to-green" questions. If this will improve the level of realism in the SDP results, we support this effort. We also urge the NRC to move forward on improving realism in the treatment of common cause failure probabilities and human reliability assessment in the significance determination process. This has been the subject of much discussion with the NRC staff for at least the past two years and remains a source of inconsistency in the implementation of the significance determination process.

7. Assess additional actions identified in the EP FSA

We would like to see the recommendations of the EP FSA given prompt and thorough consideration, with appropriate opportunities for public involvement.