1201 F Street, NW, Suite 1100 Washington, DC 20004 P: 202.739.8081 jwp@nei.org nei.org



September 19, 2018

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

Subject: ROP Enhancement

## Project Number: 689

Dear Mr. Nieh:

The Nuclear Energy Institute (NEI)<sup>1</sup>, on behalf of its members, would like to express its appreciation for the NRC soliciting ideas for enhancing the Reactor Oversight Process (ROP). Our recommendations are provided in two enclosures to this letter.

#### The ROP Remains Sound

We think it is important to acknowledge that the ROP remains sound. It has been an effective model for regulatory oversight since its inception 18 years ago.<sup>2</sup> Over that period, US nuclear fleet performance has improved significantly.<sup>3</sup> We believe the fundamental structure of the ROP played an important part in incentivizing good performance and focusing NRC resources on departures from desired performance.

The ROP has evolved in response to operating experience. For example, when experience showed that changes were needed in the treatment of cross-cutting issues and the Column 3 threshold, the NRC engaged stakeholders in an open, collaborative process to arrive at appropriate solutions.<sup>4</sup> We see the current interest in ROP enhancement in this same light. Under the theme of ROP enhancement, the NRC and industry have discussed several potential changes to the ROP in the past year. Most of these ideas were discussed in isolation. Our intent with this letter is to pull together the many ideas into a concise and integrated form.

<sup>&</sup>lt;sup>1</sup> The Nuclear Energy Institute (NEI) is the organization responsible for establishing unified industry policy on 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/engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations and entities involved in the nuclear energy industry.

<sup>&</sup>lt;sup>2</sup> See Staff Requirements Memorandum SECY-99-007, "Recommendations for Reactor Oversight Process Improvements," June 18, 1999, available at www.nrc.gov.

<sup>&</sup>lt;sup>3</sup> Fleet performance statistics are available at https://www.nei.org/resources/statistics/.

<sup>&</sup>lt;sup>4</sup> Memorandum from Ho K. Nieh (Director of DIRS/NRR) to Eric J. Leeds (Director of NRR), "Reactor Oversight Process Enhancement Project – Baseline Inspection Program," April 4, 2014, ADAMS Accession Number ML14017A338.

Mr. Nieh September 19, 2018 Page 2

### **Basis for Industry Proposal**

The industry proposal is based on four points:

- US Fleet Maturity: The power reactor fleet now has more than four-plus decades and more than 4,000 reactor-years of operating experience. With that experience the industry has gained knowledge and proficiency in maintaining consistent plant performance, as reflected in the fleet average capacity remaining at or above 90 percent since the ROP began.<sup>5</sup>
- 2. Improved Safety Margins: Through shared learning, best practices, and hardware improvements, the industry has achieved greater safety margins, lower core damage frequencies, and better defense-in-depth over the life of the ROP.<sup>6</sup>
- 3. Improved Risk Assessments: The technology of probabilistic risk assessment (PRA) has improved over the life of the ROP, enabling more precise and confident estimates of plant risk.
- 4. Greater Use of Risk Informed Decision-Making: More widespread use of risk-informed thinking has enabled improved focus of attention and resources on the more risk-significant aspects of plant operations and oversight.

## **Overview of Proposal**

Our proposal consists of 27 recommendations presented in Enclosure 1. The major thrusts of these recommendations are:

- Clarifying the risk significance of Green, White, Yellow and Red findings
- Reducing the unproductive impacts of White findings
- Resolving challenges to the licensing basis
- Opening up communications about inspection issues
- Reducing baseline inspection hours
- Simplifying the Mitigating Systems Performance Indicator

The recommendations were pulled together by a team of industry ROP experts. The recommendations were weighed for their individual contributions to improved ROP effectiveness and efficiency, and for potential adverse interactions. In addition, the team tested the proposed actions to ensure consistency with the NRC's Principles of Good Regulation.<sup>7</sup> The team also identified recommendations that help promote prompt resolution of issues and returning the plant to its baseline risk profile as soon as practical.<sup>8</sup>

The need for change is well documented in NEI's March 2018 report, "A Framework for Regulatory Transformation".<sup>9</sup> The recommendations presented in Enclosure 1 have been mapped to the NEI report, where appropriate, to ensure a consistent theme and message for determining which changes are beneficial.

<sup>&</sup>lt;sup>5</sup> Exact values are available at https://www.nei.org/resources/statistics/us-nuclear-generating-statistics.

<sup>&</sup>lt;sup>6</sup> "Insights on Risk Margins at Nuclear Power Plants," Electric Power Research Institute document 3002012967, May 2018.

<sup>&</sup>lt;sup>7</sup> Available at <u>https://www.nrc.gov/about-nrc/values.html#principles</u>.

<sup>&</sup>lt;sup>8</sup> Mentioned in letter from Greg Halnon, Chairman (NRUG), to Christopher G. Miller, Director, DIRS/NRR/NRC, "Transforming the Reactor Oversight Process to a New Paradigm," May 2, 2018, ADAMS ML18127A080.

<sup>&</sup>lt;sup>9</sup> Transmitted via letter from Pamela B. Cowan (NEI) to Dan Dorman (NRC), "NEI Recommendations for NRC's Regulatory Transformation Initiative," March 16, 2018.

Mr. Nieh September 19, 2018 Page 3

The recommendations are also mapped to those in the NRC's recent transformation report, SECY-18-0060, "Achieving Modern Risk-Informed Regulation,"<sup>10</sup> to show that industry's recommendations are consistent with the NRC's. In Enclosure 2, NEI provides a graphical depiction of the recommendations to aid to understanding the context and priority of the recommendations.

# **Next Steps**

We recommend the following next steps:

- 1. Open a dialogue on these recommendations as currently planned, including industry briefing to NRC on September 20, followed by a second public meeting to discuss NRC questions in the October-November timeframe.
- Take prompt action on high priority recommendations to establish momentum. We would suggest the following: (a) Eliminate press release for White findings; (b) Reduce burden of radiation protection and emergency preparedness inspections; (c) Eliminate materials inspections of Independent Spent Fuel Storage Installations;<sup>11,12</sup> (d) Establish policy to respect the licensing basis and a process for resolving very low risk questions about the licensing basis.
- 3. Evaluate all ROP enhancement recommendations and implement an action plan to manage the NRC's work on the recommendations by December 31, 2018.

If you have any questions about our proposal, please contact me or my lead staff member on the ROP, James Slider, at (202) 739-8015 or jes@nei.org.

Sincerely,

Bill Pitesa

Bill Pitesa

Enclosures (2)

C: Margaret M. Doane, EDO

Christopher G. Miller, Director, DIRS/NRR David C. Lew, Regional Administrator, Region I Catherine Haney, Regional Administrator, Region II K. Steven West, Regional Administrator, Region III Kriss M. Kennedy, Regional Administrator, Region IV

<sup>&</sup>lt;sup>10</sup> SECY-18-0060, Achieving Modern Risk-Informed Regulation, NRC Accession Number ML18110A186, May 23, 2018.

<sup>&</sup>lt;sup>11</sup> Inspection Procedure 60855, "Operation of an Independent Spent Fuel Storage Installation," Issued Date 01/16/08, ADAMS ML073100489. <sup>12</sup> Inspection Procedure 60855.1, "Operation of an Independent Spent Fuel Storage Installation at Operating Plants," Issued Date 09/05/06, ADAMS ML062440146.

#### Introduction

The recommendations provided here are organized in four broad aspects of the Reactor Oversight Process: (1) the Baseline Inspection Program; (2) the Action Matrix; (3) the Significance Determination Process; and (4) response to inspection issues. In each of these four areas, we present a summary and overall rationale for the recommendations. Following the introduction, we present a list of specific recommendations with notes indicating their tie to NRC's transformation report and NEI's.

#### Area 1 – The Baseline Inspection Program

Since inception, the amount of baseline direct inspection hours has increased by approximately 30 percent.<sup>1</sup> Although some increase might have been expected if operating experience revealed major gaps in the baseline inspection program, no major gaps have been identified. Moreover, the industry's high level of safety performance has not been factored into the baseline inspection program hours. Experience with the recent Engineering Inspection Procedure reform effort, which NRC estimates will reduce inspection effort in the engineering area alone by 16 percent, gives industry confidence that <u>overall</u> baseline inspection program hours can be pared by a nominal 20 percent.

The stakeholder engagement process followed by the NRC's Engineering Inspection Procedure Working Group was well received and produced efficient and effective recommendations. Such an approach should be a model for future interactions on significant changes to the ROP. This effort produced a consolidation of inspection effort and reduction of redundancy and overlap. Additionally, a more efficient and agile inspection cycle resulted, as well as a strong recommendation to give inspection credit for self-assessments. The engineering procedure effort produced a meaningful reduction in direct inspection hours over a four-year cycle while maintaining the agility to respond to operating experience and ensure comprehensive inspections of engineering performance.

ltem	Area 1 - Recommendations to Enhance the Baseline Inspection Program	Map to NRC Transformation	Map to NEI Transformation
		<b>Report</b>	Report
1A	Revise RP Inspections: Review radiation	III (a) (2)	3,4
	protection inspections to apply lessons learned		
	from the Engineering Inspections Working Group		
	to streamline them (following the stakeholder		
	engagement process employed with engineering		
	inspections); include credit for self-assessments.		
1B	Revise EP Inspections: Review emergency	III (a) (2)	3,4
	preparedness inspections to apply lessons		
	learned from the Engineering Inspections		
	Working Group to streamline them (following		
	the stakeholder engagement process employed		
	with engineering inspections); include credit for		
	self-assessments		

<sup>&</sup>lt;sup>1</sup> NEI research beginning with baseline hours presented in SECY-99-007 and data provided in "Operating Reactors Business Line Fee Estimates," available at ADAMS ML17271A262 (NEI internal reference J. Slider email September 12, 2018).

<sup>&</sup>lt;sup>2</sup> SECY-18-0060, "Achieving Modern Risk-Informed Regulation," ML18119A186, May 23, 2018.

<sup>&</sup>lt;sup>3</sup> "A Framework for Regulatory Transformation," transmitted to NRC by Pamela Cowan (NEI), March 16, 2018.

Item	Area 1 - Recommendations to Enhance	Map to NRC	Map to NEI
	the Baseline Inspection Program	Transformation	Transformation
		Report	Report
1C	Revise Security Inspections: Review security	III (a) (2)	3,4
	inspections to apply lessons learned from the		
	Engineering Inspections Working Group to		
	streamline them (following the stakeholder		
	engagement process employed with engineering		
- 15	inspections); include credit for self-assessments		
10	Reduce Baseline Hours for Higher Performers:	III (a)	2
	Reduce the baseline inspection nour levels	effective use of resources	
	based on sustained plant performance. Higher	and use of OE	
	performing plants should merit at least 25		
	percent rewer baseline inspection nours. This		
	can be achieved by reducing the number of		
	in the existing inspections. These inspection nours		
	touch points ansure lovels of performance are		
	sustained. Higher performing plants could be		
	defined as baying no greater than grean inputs		
	to the Action Matrix in the past 12 months		
15	Pemove PI&P Inspection from Baseline	III (a)	2.2
10	<b>Program:</b> Change Inspection Procedure 71152	Apply concepts of more	2,5
	Problem Identification and Resolution <sup>4</sup> to an	effective use of resources	
	inspector follow-up or reactive procedure	and use of OE	
	(described below) and remove it from the		
	baseline inspection program.		
	Resident Inspectors focus daily on the Corrective		
	Action Program (CAP) by reviewing all new		
	condition reports (CRs). Moreover, in most		
	inspections, inspectors focus first on CAP		
	entries. Thus, each inspection and inspector		
	assesses the ability of the plant to find and fix its		
	problems. Focusing a separate inspection team		
	solely on PI&R is redundant to the assessment of		
	the PI&R function that occurs in almost every		
	inspection. In addition, the cross-cutting issues		
	element of the ROP captures trends in PI&R		
	performance in every inspection.		
1F	Refrain from Expanding Baseline Inspection	III (a)	2,3
	Effort in Future: Establish and enforce policy	Apply concepts of more focused use of resources	
	requiring no net increase in baseline inspection		
	hours when considering new areas of inspection		
	(including current consideration of inspecting		

<sup>&</sup>lt;sup>4</sup> Inspection Procedure 71152, "Problem Identification and Resolution," Issue Date 02/26/15, ADAMS ML14316A042.

Item	Area 1 - Recommendations to Enhance	Map to NRC	Map to NEI
	the Baseline Inspection Program	Transformation	Transformation
		Report <sup>2</sup>	Report <sup>3</sup>
	Beyond Design Basis features). When NRC		
	wishes to add new subjects or scope to the		
	Baseline Inspection Program, it should identify		
	subjects and scope that will be removed from		
	the BIP to prevent increasing the BIP hours. The		
	treatment proposed for FLEX inspections is an		
	example of weaving a new area of inspection		
	into the existing baseline program while striving		
	to avoid increasing direct inspection hours.		
1G	<b>Revise Use of Mitigating Systems Performance</b>	III (a)	4
	Index: Reevaluate the NRC's treatment of the	Apply concepts of more	
	MSPI. Consider eliminating overlap between	effective use of OE	
	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).		
	To improve MSDI margin, plant changes have		
	to improve MSPT margin, plant changes have		
	well as MSPI margin, With the increased MSPI		
	well as WISPI Inargin. With the increased WISPI		
	margin, the indicator oriers inflited remaining		
	threshold. The Maintenance Bule menitors 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		
1H	Fliminate Materials Inspections of ISESIs:		
	Inspection Procedures $60855^5 \& 60855.1^6$		
	should be eliminated as redundant to numerous		
	other inspection activities. The resources		
	identified for the various inspection activities do		
	not comport with the known safety significance		
	associated with dry fuel storage and ISFSI		
	operation. Activities associated with loading		
	canisters are understood to fall within oversight		
	by the resident staff.		

 <sup>&</sup>lt;sup>5</sup> Inspection Procedure 60855, "Operation of an Independent Spent Fuel Storage Installation," Issued Date 01/16/08, ADAMS ML073100489.
<sup>6</sup> Inspection Procedure 60855.1, "Operation of an Independent Spent Fuel Storage Installation at Operating Plants," Issued Date 09/05/06, ADAMS ML062440146.

#### Area 2 - Action Matrix Enhancements

The impacts of column changes in the Action Matrix<sup>7</sup> have increased significantly over the life of the ROP. As industry performance has improved, the external (media and financial market) response to every column change has become more pronounced. In addition, the effort required to resolve low-to-moderate safety or security issues has increased since the beginning of the ROP. Today, the resources expended by both the NRC and licensees are no longer commensurate with the risk significance of these issues. This rise in expectations to address and resolve these issues is inconsistent with the goals of the ROP. The increase also detracts from the resources and management attention available to focus on matters of greater safety significance and promptly returning the plant to its baseline level of risk.

The Action Matrix creates a means by which low-to-moderate safety issues may be aggregated and trigger a more significant column change. The original design of the ROP considered the appearance of low risk issues as expected, random variations in plant performance. It was also assumed that occasionally, plants would realize a low but slightly elevated safety significant finding, resolve it, and return to baseline risk operation. In practice, it is possible for issues to aggregate, even if one or more of the issues have long since been resolved and the plant returned to its baseline risk values. This causes an intense effort to establish an actual significance that is more precise (usually lower) through more detailed calculations, tests, and judgment by licensees. Additionally, eighteen years of ROP experience indicates aggregation of inputs is not necessarily a meaningful predictor of future safety performance and fails to justify escalation through the Action Matrix. Further, the immediacy of NRC public communications on low-risk issues gives the lay public a misleading impression of the importance of issues of low safety significance. Consistent with the Petition for Rulemaking submitted by the industry for elimination of the immediate reports of non-emergency events, <sup>8</sup> actions below consider the need for non-urgent information. As changes are made to the regulatory treatment of White inputs, conforming changes throughout the ROP should be explored and implemented.

ltem	Area 2 - Recommendations to Enhance the Action Matrix	Map to NRC Transformation Boport <sup>2</sup>	Map to NEI Transformation
2A	Revise Public Communications on White Findings: 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.	NA	3
2B	<b>Revise the Structure of the Action Matrix:</b> Below are several actions to clarify the signifi- cance of plant issues, the level of plant perfor- mance, and the plant's ability to maintain plant risk as close to baseline as reasonably achievable.	Below	Below

<sup>&</sup>lt;sup>7</sup> The ROP Action Matrix is described in NRC Inspection Manual Chapter 0305.

<sup>&</sup>lt;sup>8</sup> Bill Pitesa (NEI) letter to Annette Vietti-Cook (NRC), "Petition to Amend 10 CFR 50.72, Immediate Notification Requirements for Operating Nuclear Power Reactors," August 2, 2018, accepted as NRC PRM-50-116, available at <u>www.regulations.gov</u> on Docket NRC-2018-0201.

# **Recommendations for ROP Enhancement**

Item	Area 2 - Recommendations to Enhance	Map to NRC	Map to NEI
	the Action Matrix	Transformation	Transformation
		<b>Report</b> <sup>2</sup>	Report
2B.1	Combine Columns 1 and 2: Combine Action	Encl 6 (2)	3
	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.		
	This would eliminate the aggregation of Whites		
	and allow the plant's CAP to work as designed in		
	and allow the plant's CAP to work as designed in		
	nominally operate with baseline CDEs between		
	$10^{-5}$ and $10^{-6}$ /yr. Also, this would establish a		
	column change as a more significant event the		
	nublic would better understand		
2B 2	Follow-I In via Resident Inspectors: Establish the	III (a) &	3 /
20.2	follow-up and closure for White findings through	Encl 6 (20)	5,4
	the resident inspector inspecting the causal		
	analysis Initially this was approximately 16		
	hours as originally anticipated in the 2002		
	version of the IP 95001 procedure. Ensure the		
	attributes of the 95001 procedure for prevention		
	of recurrence, extent of cause/condition are		
	assessed, possibly through a PI&R-type sampling		
	process.		
2B.3	Redirect IP 95001: Change the IP 95001 from a	Encl 6 (2)	2,3
	stand-alone "supplemental" procedure for	Threshold of very low	
	Whites to become a follow-up to Yellow or Red	salery significance issues	
	findings as an initial inspection, with triggers for		
	expanded inspections using IP 95002 or IP		
	95003, if necessary. This is consistent with a		
	graded approach where performance dictates		
	escalation, not blindly automatic escalation by		
	process.		

Item	Area 2 - Recommendations to Enhance	Map to NRC	Map to NEI
	the Action Matrix	Transformation	Transformation
		<b>Report</b> <sup>2</sup>	Report
2B.4	Revise IP 71152 to be Reactive:	III (a)	3
	Change IP 71152, Problem Identification and	resources	
	Resolution, to an inspector follow-up or reactive		
	procedure and remove it from the baseline		
	inspection program. In just about every direct		
	inspection, the focus is first on the corrective		
	action program. Each inspector makes		
	assessments of the ability of the plant to find		
	and fix its problems; hence to focus a team on		
	solely PI&R is redundant to almost every		
	inspection. The cross-cutting program monitors		
	for trends in PI&R shortfalls.		
2B.5	Promptly Close White Findings: Close White	Encl 6 (2)	3
	findings upon successful completion of the	Encourage prompt	
	resident inspector follow-up of the causal	licensee corrective actions	
	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.		
2B.6	Redefine Finding Labels: Establish labels of	Encl 6 (2)	2,3
	Green as " <u>very low</u> safety significance," White as		
	"low safety significance," Yellow as "moderate		
	safety significance," and Red as " <u>high</u> safety		
	significance."		
	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.		

#### **Area 3 - Significance Determination Process**

Over the life of the ROP, probabilistic risk assessments (PRAs) have become more widely used as an adjunct to traditional deterministic safety analyses. PRAs have proven very valuable as systematic tools for identifying residual weaknesses in plant design and operations, and in providing perspective on the relative importance of challenges to plant safety. As PRAs have grown more sophisticated and increased in scope to include external hazards, estimates of additional risk contributors have been included while the thresholds for ROP decision-making have remained constant.

Since the ROP began, plant design changes and operational improvements have contributed to increasing margin. In light of our improved understanding of margin and insights from more sophisticated PRA modeling, the Electric Power Research Institute (EPRI)<sup>9</sup> concluded that "...only in the most extreme cases could uncertainties play a significant enough role... at least with regard to cases in which the CDF approaches (or even exceeds) the subsidiary objective." In other words, NRC and industry are spending vast resources to align on an estimate of risk used in the significance determination process when safety margins far exceed uncertainties in the quantitative results. It is important to recognize in the SDP that PRA is a decision-support tool, not the decision-making tool. Additionally, the use of monitored plant performance data should be used to inform the SDP as gates to higher issue significance assements. The recommendations below would address this.

Item	Area 3 - Recommendations to Enhance	Map to NRC	Map to NEI
	the Significance Determination Process	Transformation	Transformation
		Report	Report
ЗА	<b>Revise EP SDP:</b> Revise the EP SDP to consider the site's performance in the Cornerstones of Initiating Events, Mitigating Systems, and Barrier Integrity. If performance in all three Cornerstones is clear of open White inputs, then defense-in-depth (DID) is robust and the safety significance of the EP performance deficiency is less than would otherwise be the case.	NA	1,2,3
	The EP SDP should be constructed to consider licensee performance in the ROP cornerstones associated with other elements of reactor safety Defense-in-Depth (DID). This approach would risk-inform EP SDP outcomes with contemporaneous, site-specific information relevant to the maintenance of other reactor safety DID barriers for protection of public health and safety.		

<sup>&</sup>lt;sup>9</sup> "Insights On Risk Margins At Nuclear Power Plants: A Technical Evaluation of Margins in Relation to Quantitative Health Objectives and Subsidiary Risk Goals in the United States," May 2018 EPRI Whitepaper from Risk and Safety Management.

Item	Area 3 - Recommendations to Enhance	Map to NRC	Map to NEI
	the Significance Determination Process	Report	Report
3A.1	Expand 3A Approach to All Deterministic SDPs	NA	1,2,3
	The philosophy setting the policy for the EP		
	SDP above should be applied to all		
	deterministic SDPs as much as practical.		
3B	Combine BDB into One SDP: For Beyond	III (a)	4
	Design Basis (BDB) SDP, combine all IMC 0609		
	appendices currently used <sup>10</sup> into one SDP for		
	BDB events.		
3C	Stop Appendix M Revision:	III(a)	4
	Stop work on IMC 0609, Appendix M and leave		
	as-is. <sup>11,12</sup>		
3D	Standardize PRA Inputs to SDP: Develop a	III (a)	1,4
	consensus methodology for PRA inputs that	Use of new tools and technology	
	will align the NRC and industry on uncertainties	teennoiogy	
	in key variables when beginning a PRA analysis		
	of a performance deficiency. These key		
	variables include, among others, Human		
	Reliability, Common Cause, and Exposure Time.		
	Presently, PRA results differ from the NRC's		
	SPAR models largely due to the sensitivity of		
	these inputs and incorporation of plant		
	changes. The NRC RASP Handbook provides		
	very conservative initial assumptions which		
	drive the significance higher in many cases.		
	This causes consternation and application of		
	intense resources, both by the NRC and		
	industry, only to eventually come out in the		
	end as very low safety significance. Since 2010,		
	less than nine percent of findings actually		
	escalated above very low significance.		
3E	Develop Procedure to Align on PRA Inputs	III (a), Rec 2	1
	Early: While the consensus methodology is	Use of new organizational	
	being developed, the NRC should institute a	10013	
	procedural requirement to fill out a worksheet		
	with the three key variables and obtain		
	alignment with the licensee on other major		
	inputs prior to running models either in SPAR		
	or the licensee's PRA.		

<sup>&</sup>lt;sup>10</sup> Notably IMC-0609, Appendix L and Appendix O.

<sup>&</sup>lt;sup>11</sup> Christopher Earls (NEI) letter to Christopher Miller (NRC), "Significance Determination Process Revisions," October 12, 2017, ADAMS

ML17338A031. <sup>12</sup> NRC released another draft of a proposed revision of IMC 0609, Appendix M, to ADAMS on September 14, 2018, just in time for a public ROP meeting scheduled for September 20, 2018.

Item	Area 3 - Recommendations to Enhance the Significance Determination Process	Map to NRC Transformation	Map to NEI Transformation
25	Experience shows that when these variables are commensurate input into either the SPAR or site-specific PRA, the outcomes are nominally equivalent.		
31	Develop NRC Interface for Licensee PRAs: Industry and NRC should jointly develop a portal for NRC access to the licensee's site- specific PRA models for the purpose of supporting SDPs. This interface would enable NRC to maintain independence of thought, assumptions, and inputs, while allowing PRA practitioners to see results from the licensee models. The portal would allow NRC to exercise the licensee's PRA application without requiring NRC to obtain the training or licenses necessary for detailed manipulation of models in the licensee's chosen PRA software.	III (a)	4
3G	<b>Eliminate Use of SPAR in SDP:</b> Once the portal is implemented and proven satisfactory, NRC should eliminate the use of the SPAR model in SDPs.	III (a) More efficient use of resources	4

#### Area 4 - Response to Inspection Issues

Since inception of the ROP, the industry has engaged the NRC through the ROP Task Force and Regional Utility Groups (RUGs), and in recent years, the Regulatory Issues Working Group, on inspection issue resolution. Many enhancements over the years have been made by both the NRC and the industry. We appreciate the recent backfit training and are encouraged by the trajectory of this issue to hold the approved licensing basis as the foundation of decades of safe operation. Considering the desire to focus resources on the more safety significant issues, enhancements to the openness and transparency as well as the reliability of the processes used for inspection issue response can be made.

Item	Area 4 - Recommendations to Enhance	Map to NRC	Map to NEI
	Response to Inspection Issues	Transformation	Transformation
		Report	Report
4A	Establish Policy to Respect Licensing Basis:	NA	3,4
	Establish an NRC policy where the approved		
	licensing basis of a plant is to be respected as		
	complete and adequate. Inspector questions		
	on the approved licensing basis arising from		
	ambiguity in wording, less than desired detail,		
	or absence of specific information should not		
	be judged to be proof the licensing basis is		
	inadequate unless a clear and compelling case		
	can be made that the apparent gap must be		
	closed to assure adequate protection.		
4B	Establish Means of Resolving Very Low-Risk	III (b)	3
	Licensing Basis Concerns: NRC should establish	Encl 6 (2)	
	a process for resolving very low-risk licensing		
	basis concerns. Ideally, the process should be		
	developed through a collaborative effort		
	between an NRC Working Group and		
	corresponding NEI task force. This effort should		
	work with concepts introduced in SECY-18-		
	0060 relative to changes in the 10CFR 50.59		
	process. The process would be used for		
	adjudication of 1) licensing basis challenges		
	and 2) adding clarity to the licensing basis to		
	exclude challenges to the licensing basis over		
	interpretations of the licensing basis by		
	inspectors. In this process, there should be an		
	option for the licensee to perform a licensing		
	basis change or clarification, rather than invest		
	extensive resources in the contesting process,		
	backfit process, or other regulatory issue		
	resolution method.		

# Recommendations for ROP Enhancement

Item	Area 4 - Recommendations to Enhance Response to Inspection Issues	Map to NRC Transformation	Map to NEI Transformation
		Report	Report
4C	<b>Open Up Communications about Inspection</b> <b>Results:</b> 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.	NA	NA
4D	Standardize Issue Escalation Practices: 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.	III (a) Reduced burden on licensee	NA



J. Slider, NEI, 20180917

Warranted by Issue

**ROP Enhancement** 



F
Y
5
<b>D</b>
ŭ
č
5
<b>U</b>





