NEI Comments on the NRC Working Group Proposal
To Revise the Substantive Cross-Cutting Issue Process

Introduction

In early November, 2014, the NRC released staff recommendations for revising the substantive cross-cutting issue (SCCI) process.[1] This followed public meetings in November 2013 and February and May 2014, held to discuss stakeholder concerns with the SCCI process and an industry proposal showing how other elements of the regulatory process make the SCCI process unnecessary. The November 2014 recommendations were to:

- Revise terminology, removing the word "substantive" from the label, so that what is now labeled an SCCI would in the future be called simply a "Cross-Cutting Issue" or "CCI".[2]
- Increase the threshold for a cross-cutting theme to six for all cross-cutting aspects, except for aspects in the safety conscious work environment (SCWE) cross-cutting area.[3]
- Revise the subjective questions and set more objective criteria for opening a CCI.
- For Column 4 plants, close out all CCI in the Confirmatory Action Letter closing out the 95003 inspection.
- Develop a backstop at the cross-cutting area level.
- Develop standard CCI closure criteria.
- Consider additional actions for licensees after the second consecutive assessment cycle with the same CCI.

The staff report also included information on the staff's reasons for rejecting industry's proposal.[4] On November 19, 2014, the NRC held a public meeting[5] to discuss the staff recommendations and stakeholder feedback. During the meeting, the staff invited industry to submit additional feedback in writing. This letter responds to that invitation.

[1] "Working Group Recommendations to Revise the Substantive Cross-Cutting Issue Process", ADAMS Accession number ML14309A612, added November 6, 2014.

[2] For the remainder of this document, the term "CCI" refers to cross-cutting issues as they will be labeled after implementation of the proposed changes in the present SCCI process. Hereafter, the term "SCCI" refers to the existing substantive cross-cutting issue process prior to the proposed changes.

[3] Per NRC Inspection Manual Chapter 0305, Section 04.11 (Issued November 20, 2014), a cross-cutting theme exists in the cross-cutting area of safety-conscious work environment (SCWE) if at least one of the following three conditions exists in an 18-month period (i.e., the current mid- or end-of-cycle assessment period and the two quarters preceding that period): (1) a finding with a documented cross-cutting aspect in SCWE and the impact on SCWE was not isolated, or (2) the licensee has received a chilling effect letter, or (3) the licensee has received correspondence from the NRC that transmitted an enforcement action with a Severity Level (SL) I, II, or III, and that involved discrimination, or a confirmatory order that involved discrimination. Per the nuclear safety culture common language documented in Inspection Manual Chapter 0310, Section 06.03 (Issued December 19, 2013), there are three aspects to the SCWE cross-cutting area: (1) SCWE Policy, (2) Alternate Process for Raising Concerns, and (3) Free Flow of Information.

[4] A description of the industry alternative is available in ADAMS under Accession Number ML14155A098; the staff's summary of a May 20, 2014 meeting at which the industry proposal was discussed in detail is available under Accession Number ML14155A082.

[5] NRC Memorandum from Daniel J. Merzke to Nathan T. Sanfilippo, "Summary of the Public Meeting to Discuss the Nuclear Regulatory Commission Staff Recommendations to Revise the Substantive Cross-Cutting Issue Process", December 3, 2014, ADAMS Accession Number ML14328A151.

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Comments

Many of the comments below are linked to line numbers shown in the version of the NRC proposal provided in Attachment 2.

1. **The Recommendations are a Good First Step:** The staff recommendations are a good first step toward reducing the burden of the SCCI process. We hope that the staff will continue to look for options to reduce the burden added by the SCCI process, including eliminating the process entirely. We do not see evidence that the SCCI process has added unique value to the ROP that justifies continuing with SCCIs in any form. However, we see ample evidence that safety culture monitoring and management have matured greatly in the eight years since the SCCI process was implemented.

2. **The Obligation to Correct Assignment of CCAs when Justified is Essential:** The working group report is silent on an important detail of implementation—the ability to correct the choice of cross-cutting aspect assigned to an inspection finding. The NRC inspection process can lead an inspector to assign a cross-cutting aspect to an inspection finding before all the facts are known about the causes of the underlying performance deficiency.[6] As discussed at the November 19, 2014, public meeting, the industry considers it essential for the NRC to correct the cross-cutting aspect assigned to a finding when the results of the licensee's causal analysis indicate this is warranted.

3. **Proposed Actions for a Second SCCI are Excessive:** The working group report recommends additional options for Regions to consider for licensees with a second consecutive CCI. The proposed options would include having Regional Administrators and/or the Director of the Office of Nuclear Reactor Regulation or the Executive Director of Operations meet with the licensee's Board of Directors or having the licensee meet with the Commission. These options appear excessive. Consider:

    a. The NRC does not yet know for sure that the proposed changes in the SCCI process will make the CCI a meaningful measure of licensee performance [see Attachment 2, page 3, line 32, *"A higher threshold <u>could</u> make SCCIs a better predictor of declining licensee performance."* (Emphasis added)]. Before the NRC takes a decision as severe as demanding a meeting with the Board of Directors, the agency should know for sure that the basis for that demand (in this case a long-standing CCI) is proven to be a meaningful measure of performance.

    b. The NRC does not yet know what effect the proposed changes in CCI opening and closure criteria will have on the licensee's ability to understand and correct the causes of the problems that led to the CCI. At this point, the NRC does not know whether the changes will give licensees more or less control over the length of time that a CCI persists.

    c. The proposed options could trigger unintended consequences counterproductive to performance improvement. Given the inconsistent and sometimes vague descriptions of past SCCIs and the yet-to-be-determined requirements for documenting future CCIs, the NRC should be loath to propose actions that might upend site leadership for any reason short of the gravest of concerns. As the staff's own work has shown [see allusion to staff's self-assessment of SCCI effectiveness in Attachment 2, page 1, lines 49-50], SCCIs have not been shown to be uniquely effective in identifying such grave concerns. Until the revised CCI process is shown to produce that reliable indication of grave concerns, the NRC should not consider a CCI alone to be justification for exercising the proposed additional options.

4. **Stakeholder Involvement during Implementation of the Proposed Changes is Critical:** Much work remains to be done to translate the staff recommendations into implementing documents (e.g., changes

[6] Per Section 06.03.c, of NRC Inspection Manual Chapter 0612, Power Reactor Inspection Reports, Issued January 24, 2013, ADAMS Accession Number ML12244A483.

in Inspection Manual Chapters, Inspection Procedures, and other NRC documentation). It is important for NRC to develop these implementing documents in an open and transparent manner that includes appropriate opportunities for meaningful input from outside stakeholders. Examples include:

a. Attachment 2, page 4, lines 28-29: *"IP [Inspection Procedure] 71152 could be revised to address additional follow-up activities."*

b. Attachment 2, page 4, lines 32-33: *"This would trigger an SCCI[7] follow-up inspection, similar to a 95001 inspection."* Enclosure 2, page 6, lines 9-11: *"The working group recommends developing an SCCI follow-up inspection procedure, similar to IP 95001, to review a licensee's causal analysis and corrective actions, in order to close out an SCCI."*

c. Attachment 2, page 5, lines 6-7: *"For Column 4 plants, all SCCIs would be closed out in the Confirmatory Action Letter (CAL) closing out the 95003 inspection."*

d. Attachment 2, page 5, lines 39-41: *"A licensee who trips the threshold for the backstop at the cross-cutting area level would meet the criterion for a cross-cutting theme, which would trigger some follow-up inspection."* (Emphasis added.)

5. **A Commitment to Future Reviews of CCI Experience is Needed:** Missing from the working group report is a recommendation for the NRC to review experience with the revised CCI process at a specific point in the future. We recommend that the NRC review experience with the CCI process at the anniversary of implementation of the revised process every year, unless and until the NRC eliminates the CCI process. The annual review should test cumulative experience against the hypotheses below and document the unique value added to the Reactor Oversight Process by the use of the CCI process.

6. **Define Testable Hypotheses for Future Review:** The working group report makes assertions without providing supporting evidence. If there is evidence supporting these assertions, the NRC should document that evidence in the basis document for the SCCI process changes (e.g., Inspection Manual Chapter 0308). If these assertions are engineering judgments, they should be tested against experience during that future annual review. This would give the NRC a way of validating their present judgments about the CCI process and gauging the effects of the revised process. Following are some testable hypotheses gleaned from the working group report:

   a. *If a licensee effectively implements the NEI 09-07 safety culture monitoring process, the likelihood of being issued a CCI is significantly reduced* [Attachment 2, page 3, lines 6-8].

   b. *The implementation of the Safety Culture Common Language into the ROP should reduce challenges to binning findings, which may also reduce the resource burden* [Attachment 2, page 3, lines 13-15].

   c. *An increase in the threshold should reduce some of the resource burden on industry and NRC and be more indicative of a trend. A higher threshold could make CCIs a better predictor of declining licensee performance* [Attachment 2, page 3, lines 31-33].

   d. *Raising the threshold to 6 would still capture the sites with significant problems* [Attachment 2, page 4, lines 4-6].

   e. *Eliminating the subjective questions presently associated with opening an SCCI should reduce the resource burden in determining whether or not to open a CCI during the semiannual assessment meetings* [Attachment 2, page 5, lines 1-4].

[7] Contrary to the convention introduced on the first page of this Enclosure, this section of the NRC working group report refers to these future "cross-cutting issues" using the present terminology of "substantive cross-cutting issues".

7. **Determine the Data Needed for that Future Review and Begin to Collect It:** To support that future review, the NRC should begin now to determine how it will test the aforementioned hypotheses. Designing that future review *now* will reveal what data the NRC needs to conduct those tests. For example, if measures of burden (Hypotheses "b" and "e" above) are not presently being captured, the NRC should begin to capture that data so that it is readily available when the time comes for the first annual review of the CCI process.

8. **A Communications Plan is Needed:** The working group report stresses the importance of transparency in the SCCI process. However, the concepts and terminology employed in the SCCI (or future CCI) process are a great challenge to communicate to outside stakeholders. We strongly recommend that the NRC develop a complete plan for communicating the forthcoming changes in the SCCI process in the plainest of language. This outreach is critical to maintain credibility with the public on all aspects of the ROP. In addition, it is important to communicate the SCCI changes to NRC staff and industry personnel who have not been involved in prior discussions on the process or proposed changes. It is especially important, in light of recent comments from David Lochbaum, that the NRC be able to explain better than it has so far, why retaining the SCCI process, even with the proposed revisions, is essential to the ROP.[8]

9. **Basis for the Threshold of Six Needs Further Explanation:** The basis for the proposed threshold of six hits in a cross-cutting aspect should be further explained in the NRC's final documentation of the changes in the SCCI process (e.g., a revision of Inspection Manual Chapter 0308[9]). The brief description offered in the working group report [Attachment 2, page 3, line 28 through page 4, line 9] indicates the staff looked at the distribution of cross-cutting aspect assignments by site. Staff concludes that a threshold of six "…would still capture the sites with significant problems" [Attachment 2, page 4, lines 5-6]. We suggest the final documentation of the basis for the proposed threshold should provide enough information to answer the following questions:

    a. What is meant by "significant problems" that would be captured by the CCI process?

    b. How much will the rate of false positives change when the threshold moves from four to six?

    c. Twelve plant names[10] are mentioned as examples comprising a benchmark that validates the threshold of six. In what ways are these 12 cases relevant and probative? Which of these cases would have been missed had the threshold been eight or 10 that justifies setting the value at six?

    d. The statistical analysis treats all "CCA site-years" as if they are subject to just one random variable – licensee performance. However, we know from the 2013 GAO study[11], for example, that inspection findings are subject to many confounding factors, such as differences in the way the four NRC regions apply inspection guidance. Other confounding factors could include changes in guidance and expectations for identification of inspection findings over the period in question; changes in expectations and norms for assigning cross-cutting aspects; evolution of NRC management's expectations as NRC gained experience applying the SCCI process over the past eight years; and the licensees' regulatory standing. How does the NRC know that these confounding factors are unimportant when drawing insights from the record of "CCA site-years"?

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[8] David Lochbaum, Union of Concerned Scientists, letter to to Nathan T. Sanfilippo, U.S. Nuclear Regulatory Commission, January 7, 2015.

[9] NRC Inspection Manual Chapter 0308, Reactor Oversight Process (ROP) Basis Document, Issued September 4, 2014, ADAMS Accession Number ML14164A209.

[10] The 12 plants identified are: Browns Ferry, Cooper, Diablo Canyon, Fort Calhoun, Fermi, Monticello, Palisades, Palo Verde, Point Beach, Prairie Island, San Onofre and Wolf Creek. No other information is provided (e.g., dates or descriptions of the particular problems noted by the NRC at the time) on these examples.

[11] GAO-13-743, "Analysis of Regional Differences and Improved Access to Information Could Strengthen NRC Oversight", United States Government Accountability Office, September 2013.

10. **Credit for Effective Implementation of Culture Monitoring is Unclear:** The working group report says the staff recommends giving licensees credit for effective implementation of the NEI 09-07[12] process by removing the subjective questions for opening an SCCI [Attachment 2, page 4, lines 12-14]. The text does not indicate how the NRC proposal reflects credit for the NEI 09-07 process. In documenting the basis for the changes in the SCCI process, the staff should further describe the nature and significance of this credit in changing the basis for opening a CCI.

11. **Basis for Backstop Thresholds Needs Further Explanation:** The staff report does not explain what in the NRC's experience indicates that a new backstop is needed at the level of the cross-cutting area. In addition, the basis for the proposed backstop threshold in the human performance cross-cutting area and the problem identification and resolution cross-cutting area needs further explanation. In particular, the text of the working group report gives no explanation why the 97th percentile is the right choice. The text names 10 plants[13] that would have tripped the proposed backstop threshold as if these represent a benchmark proving that the proposed threshold value is appropriate [Attachment 2, page 5, lines 35-37]. As noted in similar comments about the threshold at the cross-cutting aspect level, the 10 plants are cited without additional information on the time periods or problems involved, making it impossible for the reader to verify what the staff report implies, that these cases prove about the propriety of the proposed backstop threshold value. The text does not explain what types of problems the backstop would have captured that the cross-cutting aspect-level threshold would not. For example, what problems did Comanche Peak have that should or would have been signaled by the backstop threshold but would have been missed by the cross-cutting aspect-level threshold alone?

12. **Acceptability of Null Result Needs Further Documentation:** The working group report indicates that "…it should be acceptable [to NRC] for a licensee to do a causal analysis on the cross-cutting theme and find there is no common cause." [Attachment 2, page 6, lines 13-15] It is important for the NRC to document and clarify this guidance to inspectors in the implementation of the CCI process.

[12] NEI 09-07, Revision 1, "Fostering a Healthy Nuclear Safety Culture", describes means by which U.S nuclear power plants self-monitor the health of site safety culture through periodic reviews of cultural implications of plant events and data by multi-disciplinary teams. Industry leaders volunteered to self-monitor site safety culture effective October 1, 2011.

[13] The plants are identified as Comanche Peak, Cooper, Diablo Canyon, Fort Calhoun, Grand Gulf, Palo Verde, Palisades, Prairie Island, San Onofre and Wolf Creek.