



# POLICY ISSUE

## (Notation Vote)

September 16, 2022

SECY-22-0086

FOR: The Commissioners

FROM: Daniel H. Dorman  
Executive Director for Operations

SUBJECT: RECOMMENDATIONS FOR REVISING THE REACTOR OVERSIGHT  
PROCESS ASSESSMENT PROGRAM

PURPOSE:

The purpose of this paper is to request Commission approval of recommendations to revise the Reactor Oversight Process (ROP) assessment program. The U.S. Nuclear Regulatory Commission (NRC) staff developed these recommendations based on suggestions from both internal and external stakeholders on ways to make the ROP more risk-informed and performance-based.

SUMMARY:

The staff considered stakeholder recommendations to revise the assessment program under the ROP enhancement initiative, previously documented in SECY-19-0067, "Recommendations for Enhancing the Reactor Oversight Process," dated June 28, 2019 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19070A050). The Commission approved the withdrawal of that SECY in Staff Requirements Memorandum (SRM)-SECY-18-0113, "Recommendations for Modifying the Reactor Oversight Process Engineering Inspection and SECY-19-0067 - Recommendations for Enhancing the Reactor Oversight Process," (ADAMS Accession No. [ML21217A284](#)) dated August 5, 2021. The staff is recommending two changes in the ROP assessment area. Section II.I.1(a) of Management Directive 8.13, "Reactor

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Oversight Process,” dated January 16, 2018, states that the staff should present changes to the fundamental elements of the ROP framework, which includes assessment inputs, to the Commission for approval. The staff is recommending changes to the treatment of Greater-than-Green (GTG) inspection findings and GTG performance indicators (PIs), both inputs to the assessment of licensee performance. The first recommendation is to remove GTG inspection findings as ROP Action Matrix inputs upon successful completion of the appropriate supplemental inspection. Currently, these findings remain as Action Matrix inputs for at least four full calendar quarters. The second staff recommendation is to revise the treatment of GTG PIs so that they remain Action Matrix inputs until the appropriate supplemental inspection is successfully completed. Currently, if a PI returns to Green, it is no longer an Action Matrix input, so it does not aggregate with other GTG inputs, even though the licensee remains in the higher Action Matrix column until the supplemental inspection is completed.

#### BACKGROUND:

On September 19, 2018, the Nuclear Energy Institute (NEI) submitted a letter to the Director of the Office of Nuclear Reactor Regulation to consolidate and prioritize NEI’s recommendations for enhancing the ROP (ADAMS Accession No. ML18262A322). NEI’s letter stated that the ROP remains sound, that it is an effective model for regulatory oversight, and that “the fundamental structure of the ROP played an important part in incentivizing good performance and focusing NRC resources on departures from desired performance.” The letter recommended that the NRC close White findings upon successful completion of the follow-up of the causal analysis for individual White findings.

Attachment 4, “Technical Basis for Assessment,” of Inspection Manual Chapter (IMC) 0308, “Reactor Oversight Process Basis Document,” (ADAMS Accession No. ML22080A203) provides the insight that an inspection finding is normally carried forward in the assessment program for a total of four calendar quarters, because some inspections are conducted only once per year, and carrying inspection findings forward for 12 months allows an inspection result to influence the assessment program until the next inspection is conducted. Furthermore, holding inspection findings open for 12 months allows them to accumulate with subsequent safety-significant inspection findings and PIs, to indicate more pervasive and significant performance problems that require greater regulatory engagement per the Action Matrix.

While evaluating the NEI recommendation and the changes to the ROP that could be made to incentivize more prompt licensee attention to addressing and closing GTG issues, the staff also evaluated the treatment of PIs that cross a threshold of safety significance. Currently, IMC 0305, “Operating Reactor Assessment Program,” (ML21092A111) states that “if a safety-significant PI returns to the Green performance band in a subsequent quarter, the PI is considered a Green Action Matrix input in the subsequent quarter, even if the supplemental inspection for the PI has not yet been performed.” Because of how PIs are calculated, a PI may return to the Green band even if the licensee takes no corrective actions to address the underlying cause of the decline in performance; in this case, the PI will not aggregate with other safety-significant Action Matrix inputs. The licensee remains in the higher column of the Action Matrix until the supplemental inspection is completed, but the PI no longer counts for Action Matrix input aggregation purposes when it returns to Green. There is no documented technical basis for this policy, which effectively treats closure of GTG PIs differently than GTG inspection findings. This could be perceived by stakeholders as an inconsistency in the assessment program.

In SECY-19-0067, the staff recommended that the NRC eliminate the requirement for GTG inspection findings to remain as Action Matrix inputs for four full quarters, and that the NRC

revise the treatment of GTG PIs so that they remain as Action Matrix inputs until the appropriate supplemental inspection is successfully completed. In SRM-SECY-18-0113, the Commission approved the staff's request to withdraw SECY-19-0067 because new information and additional staff activities were relevant and not considered in developing the basis for several recommendations in the paper, and directed the staff to engage the Commission, as appropriate, with any new recommendations depending on the outcome of consideration of new information and reevaluation of the bases for prior recommendations. In this paper, the staff has included additional data from seven plants that had White inspection findings and four plants that had White PIs since SECY-19-0067 was drafted. The staff concludes that the updated data continue to support the recommendations from SECY-19-0067 related to the treatment of GTG findings and GTG PIs.

#### DISCUSSION:

In evaluating these issues, the staff gathered feedback from both internal and external stakeholders. The staff discussed this topic at public meetings held on November 15, 2018 (ADAMS Accession No. ML18348B256); December 13, 2018 (ADAMS Accession No. ML18353A800); January 17, 2019 (ADAMS Accession No. ML19044A692); March 7, 2019 (ADAMS Accession No. ML19088A137); March 27, 2019 (ADAMS Accession No. ML19113A034); April 24, 2019 (ADAMS Accession No. ML19134A334); and December 2, 2021 (ADAMS Accession No. ML21348A754).

#### *Proposed Treatment of Greater than Green Inspection Findings*

Safety-significant inspection findings were originally held open for four quarters to allow for the finding to influence the assessment program until the next yearly inspection was conducted. The baseline inspection program today provides flexibility so that inspectors do not have to wait a full year to inspect the area in which an issue has been identified. While baseline inspections are planned annually, inspectors are encouraged to select samples quarterly to meet the completion requirements. Inspectors can also select a previously deficient area as a sample under Inspection Procedure (IP) 71152, "Problem Identification and Resolution." Additionally, the supplemental inspection program ensures that licensees with declining performance complete timely effective problem identification, analysis, and corrective action planning and execution to preclude repetition of significant performance issues. This means that inspectors address areas of concern sooner, rather than waiting for the following year's baseline inspection.

Inspection findings are safety significant when they increase core damage frequency by at least  $1 \times 10^{-6}$ /year, increase the probability of radiation exposure to workers or the public, or increase the probability of a significant security incident. When licensees implement corrective actions to address these performance deficiencies, the risk to plants, workers, and the public returns to baseline levels.

#### *Updated Data Analysis*

To assess the NEI recommendation, the staff analyzed the NRC's historical performance in completing supplemental inspections for GTG inspection findings beginning in calendar year (CY) 2006. The staff discounted the first 5 years of ROP implementation, as the program was then still in its infancy and evolving. Here are the results of the staff's analysis:

- Since 2006, 82.7 percent of 156 supplemental inspections performed to close White inspection findings were completed in 4 or more quarters. Fewer than 18 percent of

supplemental inspections to close White findings have been completed in less than 4 quarters. From 2000-2005, there were an additional 36 supplemental inspections completed in less than 4 quarters demonstrating that it is possible to prepare for supplemental inspections for White findings in less than 4 quarters.

- The staff analyzed the impact of reducing the time for safety-significant Action Matrix inputs to aggregate, which could potentially change Action Matrix responses if a more pervasive or significant performance concern exists. In most cases, nearly 2 full quarters, or 165 days on average, elapse from the time a safety-significant inspection finding first counts as an Action Matrix input until a final significance determination letter is issued. Because of the time needed for the NRC staff to complete significance determinations, licensees are unlikely to have supplemental inspections completed in less than three quarters from the date the inspection finding becomes an Action Matrix input unless licensees quickly accept the preliminary significance and prepare for the inspection prior to the final significance letter. Therefore, the effective impact is a reduction by at most one calendar quarter in which Action Matrix inputs may aggregate.
- Since 2016, when the definition of a degraded cornerstone was revised from 2 White inputs to 3 White inputs in a cornerstone, licensees have taken an average of 91 days, measured from issuance of the final significance determination letter, to notify the NRC of their readiness for the supplemental inspection for GTG inspection findings. While the average number of days for licensees to prepare for supplemental inspections has been declining over the years, the staff believes licensees can improve response time even further, as demonstrated by the 63 licensees who have successfully completed the supplemental inspection in less than 4 quarters.
- The average NRC response time from licensee notification of readiness until satisfactory completion of the supplemental inspection is 64 days, with a timeliness metric of 180 days. This indicates that supplemental inspection scheduling does not contribute excessively to the overall time the inspection findings are open.

#### *Historical Impact*

- The staff evaluated the potential impact if the minimum four-quarter requirement had not existed when the ROP was first implemented in CY 2000. After reviewing the performance of all reactor licensees that transitioned to Column 3 of the Action Matrix (the Degraded Performance column) because of aggregating White inputs, the staff concluded that, since the inception of the ROP in CY 2000, only 3 licensees out of 31 would not have transitioned to Column 3 if the first White input had been closed before the fourth quarter. Those three reactor licensees would not have transitioned from Column 2 to Column 3 under the current definition of a degraded cornerstone, which was revised in 2016 from two White inputs to three White inputs in the same cornerstone. The staff acknowledges that this analysis may not account for what licensees might have done had the incentive to close findings immediately upon completion of the supplemental inspection been in place.
- The staff also reviewed the eight licensees who met the criteria for a repetitive degraded cornerstone (Column 4 of the Action Matrix). Of these, only three had moved to Column 4 solely because of White inputs. All three would still have met the criteria for a

- repetitive degraded cornerstone if the four-quarter requirement had been changed as proposed.

Based on the above analysis, the staff expects the impact of removing the four-quarter requirement to the assessment of licensee performance to be minimal. The data shows that in many cases, licensees can prepare for supplemental inspections in less than four quarters. With fewer than 18 percent of all supplemental inspections for White findings taking less than 4 quarters to complete, the staff agrees with the recommendation to close GTG inspection findings promptly upon successful completion of a supplemental inspection, because eliminating the minimum four-quarter requirement would give licensees an incentive to address the issues that caused the findings and to prepare for the NRC supplemental inspection as soon as practicable. The staff believes that safety is increased when the licensee completes the causal analysis and promptly implements corrective actions for safety-significant inspection findings, and the NRC completes the supplemental inspection to verify that the corrective actions are adequate. While this change could apply to findings of any color, in practice it affects only White findings, because Yellow or Red findings are unlikely to be closed in less than four quarters due to the extensive amount of time it takes the licensee to complete the casual evaluation and plan for corrective actions. To address situations where multiple GTG Action Matrix inputs occur during a short period, potentially indicating a more significant performance problem, the staff has already revised the supplemental inspection procedures to allow for a review of potential common causes of all safety-significant inputs within a specified period (e.g., the last four quarters). Inspection IP 95001, "Supplemental Inspection Response to Action Matrix Column 2 (Regulatory Response) Inputs," (ADAMS Accession No. ML21175A172) currently directs inspectors to examine the common cause analyses for potential programmatic weaknesses in performance when there are two White inputs in the same cornerstone.

#### *Proposed Treatment of Performance Indicators*

The NRC evaluated a similar approach to increasing licensee incentives to address issues that caused a PI to exceed the Green/White threshold and to declare readiness for NRC inspection sooner. In the current program, GTG PIs are treated differently from GTG inspection findings. For example, if a PI exceeds the Green/White threshold, the licensee moves to Column 2 of the Action Matrix (the Regulatory Response column), and the PI may aggregate with other safety-significant inputs. The licensee is subject to a supplemental inspection to review its corrective actions to address the White PI, exactly the same as for a White inspection finding. However, if the PI returns to Green once new data are included, it no longer counts as an Action Matrix input and will no longer aggregate with other GTG inputs, even if the licensee has taken no corrective actions to address the underlying reason the PI exceeded the Green/White threshold. The licensee remains in Column 2 of the Action Matrix until completion of the supplemental inspection, but there are no White Action Matrix inputs for aggregation purposes, which can be confusing to stakeholders. If the licensee subsequently fails to meet the objectives of the supplemental inspection, then the region opens a parallel White finding backdated to the time the PI returned to Green. In this case, it is possible that the licensee may have moved to a higher column in the Action Matrix if other safety-significant inputs were present, and several quarters may pass before the ROP identifies the decline in performance. This is contrary to the Principle of Good Regulation on reliability, in that appropriate regulatory actions may not be promptly administered. The staff believes that the current process is overly complicated, is inconsistent with the Principles of Good Regulation on clarity and reliability and does not give licensees a sufficient incentive to address the underlying issues and prepare for a prompt NRC supplemental inspection commensurate with the safety significance of the PI, restoring the risk to plants, workers, and the public to baseline levels.

### *Updated Data Analysis*

The staff analyzed licensee historical performance in completing supplemental inspections for GTG PIs. Here are the results of the analysis:

- Overall, 58 percent of supplemental inspections for White PIs were completed 4 or more quarters from the time the PI became White. In two cases, it took nine quarters to complete the supplemental inspection.
- Since 2006, the average number of days for licensees to notify the NRC of readiness for the supplemental inspection for White PIs has steadily increased from 143 days to 235 days. (This number is measured from the first day after the quarter in which the PI becomes White, to the day when the licensee notified the NRC of their readiness for the supplemental inspection.) This data does not include licensees who failed to meet the objectives of the supplemental inspection the first time and required reinspection.
- The staff has assigned seven parallel White findings to licensees who were unable to meet the objectives of the supplemental inspection for a PI that crossed a significance threshold, allowing the inputs to aggregate with other Action Matrix inputs until the licensee satisfactorily corrected the causal factor(s) for the deficient performance. In one of those cases, the licensee moved to Column 4 because even though the PI returned to Green, the parallel finding continued to count as an Action Matrix input, aggregating with additional Action Matrix inputs, ensuring the licensee received the increased regulatory oversight commensurate with their operating performance.

### *Historical Impact*

Of the 138 instances of White PIs, no licensee would have been affected by the proposed change using the current criteria for Column 3 (i.e., three White inputs in a cornerstone) because there were either no additional Action Matrix inputs, or there would have been no change in the Action Matrix column if the PI had remained an Action Matrix input until completion of the appropriate supplemental inspection. The staff concludes that the historical impact would have been minor.

After evaluating current practices and the associated data, the staff recommends modifying the existing treatment of GTG PIs so that they remain as Action Matrix inputs until the associated supplemental inspection is completed. The staff believes that this will give licensees an incentive to complete preparations for the supplemental inspections for PIs that cross a significance threshold as soon as practicable to remove the Action Matrix input. Under the revised approach, once a PI crosses a significance threshold, the staff is proposing to open a parallel finding with the same color as the PI. This parallel finding will replace the PI as the Action Matrix input and will remain open until the supplemental inspection is successfully completed. In situations where there are no other GTG PIs or inspection findings, the licensee will return to Column 1 (the Licensee Response Column) after successful completion of the supplemental inspection, even if the PI has not yet returned to Green. PIs will continue to be reported normally, and licensees exceeding the threshold for Yellow significance will move to Column 3 of the Action Matrix. Under this approach, GTG PIs and findings will be treated the same, resulting in more consistent assessment of licensee performance. As described in IMC 0308, "Reactor Oversight Process Basis Document," (ADAMS Accession No. ML16306A386) the baseline inspection program will cover those risk-significant attributes of licensee performance not adequately covered by PIs and crossing a PI threshold and an inspection

threshold will have the same meaning with respect to safety significance and directly define the level of NRC involvement and action. The recommended approach brings the ROP closer to this original intent by handling the assessment of PIs and inspection findings and the associated licensee corrective actions in a consistently parallel manner.

Of the 138 instances of White PIs since ROP inception, 106 were inspected using the IP 95001 supplemental inspection. Of those, 74 had the PI return to Green before the completion of the supplemental inspection. Some stakeholders have shared a perception that in this scenario, the revised treatment of PIs will increase oversight. For the other 32 licensees, the supplemental inspection was completed before the PI returned to Green. Some stakeholders have shared a perception that in this scenario, the revised treatment of PIs will represent a reduction in oversight. However, 18 of the 32 PIs that crossed a White threshold were Mitigating Systems Performance Index (MSPI) PIs or Safety System Unavailability PIs, which pre-dated MSPI. Because of the way these PIs were calculated, it was not unusual for them to remain White for extended periods of time. The last time a licensee exceeded the White threshold for an MSPI PI was in CY 2013, and the last time a licensee completed the supplemental inspection before the PI returned to Green was in CY 2014, indicating that this scenario has become rare. The majority of GTG PIs today are in the Unplanned Scrams per 7000 Critical Hours PI which are more likely to return to Green prior to the supplemental inspection being completed.

The staff is proposing the following options.

Option 1: Eliminate four-quarter requirement for GTG inspection findings; no change to treatment of GTG PIs

This option would eliminate the minimum four-quarter requirement for GTG inspection findings, allowing them to be closed and no longer considered Action Matrix inputs upon satisfactory completion of the appropriate supplemental inspection. This option involves no changes to the treatment of PIs.

Pros:

- This option gives licensees an incentive to correct GTG findings and prepare for supplemental inspections as quickly as practicable, commensurate with the significance of the input. Satisfactory completion of supplemental inspections provides assurance that licensees have taken appropriate corrective actions for the performance issue.
- The assessment process will be more risk-informed and will reflect real-time licensee performance. Verification that GTG findings have been corrected provides assurance that the plant risk profile has returned to baseline risk.
- The staff's analysis of historical data shows that the change should have only a small impact to existing Action Matrix placement (i.e., reduced Action Matrix movement caused by decreased aggregation). Although, it is not possible to predict future licensee performance based on this change, the existing ROP deviation process exists for cases where licensee performance is not consistent with Action Matrix placement, providing a vehicle to mitigate any unanticipated significant impacts.
- This option addresses stakeholder concerns on timely closure of GTG inspection findings.

## Cons:

- The regions may receive requests from licensees to schedule and complete supplemental inspections more quickly, increasing regional staffing and scheduling burden.
- The incentive for licensees to perform evaluations and inspection preparations more quickly could impact quality and potentially result in an increase in unsuccessful supplemental inspections on the first attempt.
- This change has been construed as a relaxation of regulatory oversight by some stakeholders, since it could reduce the time for aggregation of Action Matrix inputs, making it harder to detect more pervasive and significant performance problems that would require greater oversight. Recent performance has resulted in relatively few safety-significant Action Matrix inputs to aggregate.
- This option does not address the complicated treatment of PIs that cross a significance threshold or the inconsistent treatment of GTG PIs and findings.

Option 2: No change to four-quarter requirement for GTG inspection findings; revise treatment of GTG PIs

Under this option, GTG inspection findings would continue to be Action Matrix inputs for four full quarters, but the NRC would revise the treatment of GTG PIs so that they remain Action Matrix inputs until inspectors complete the appropriate supplemental inspection.

## Pros:

- This option gives licensees an incentive to prepare for supplemental inspections as quickly as practicable for GTG PIs. Satisfactory completion of supplemental inspections provides public assurance that licensees understand the causes of declining performance and have identified corrective actions to address it.
- Continuing to treat the PI as an Action Matrix input after it returns to Green will allow it to aggregate with other safety-significant inputs until the NRC verifies through inspection that the licensee has addressed the causes of the decline in the PI. The increased time for aggregating safety-significant Action Matrix inputs will increase the probability of detecting more pervasive performance problems.
- Adding a parallel finding that will remain as an Action Matrix input even if the PI returns to Green, clearly communicating to stakeholders why the licensee remains in the higher Action Matrix column, will improve the clarity Principle of Good Regulation.
- This option is more consistent with the current treatment of safety-significant inspection findings.
- The staff's analysis of historical data indicates that this option will provide the incentive for the timely closure of GTG PIs without significant impact from an oversight perspective.



- This option will simplify the treatment of PIs, improving the NRC's efficiency and reliability Principles of Good Regulation.

Cons:

- The regions may receive requests from licensees to schedule and complete supplemental inspections more quickly, increasing regional staffing and scheduling burden.
- The incentive for licensees to perform evaluations and inspection preparations more quickly could impact quality and potentially result in an increase in unsuccessful supplemental inspections on the first attempt.
- Since the PIs are supposed to be objective measures of licensee performance, the staff would need to communicate why the licensee is in Column 1 of the Action Matrix if the PI remains GTG after successful completion of the supplemental inspection; this source of potential confusion could decrease the clarity Principle of Good Regulation. The staff expects this scenario to be rare, because in most cases, the PI has returned to Green before the supplemental inspection has been completed.
- This option does not give licensees any additional incentive to prepare for supplemental inspections for GTG findings in less than four quarters.

Option 3: Eliminate the minimum four-quarter requirement for GTG inspection findings; revise treatment of GTG PIs

This option would eliminate the minimum four-quarter requirement for GTG inspection findings, allowing them to be closed and no longer considered Action Matrix inputs upon satisfactory completion of the appropriate supplemental inspection. Also, under this option, the NRC would revise the treatment of GTG PIs so that they remain Action Matrix inputs until inspectors complete the appropriate supplemental inspection.

Pros:

- This option gives licensees an incentive to prepare for supplemental inspections and implement corrective actions for both GTG findings and PIs as soon as practicable. Satisfactory completion of supplemental inspections provides assurance that licensees have taken appropriate corrective actions for performance issues.
- The assessment process will be more risk-informed and reflective of real-time licensee performance because the plant risk profile will have returned to baseline risk when GTG PIs and findings have been corrected and inspected.
- GTG inspection findings and PIs will be treated consistently.
- The parallel finding will remain as an Action Matrix input even if the PI returns to Green, clearly communicating to stakeholders why the licensee remains in the higher Action Matrix column, improving the clarity Principle of Good Regulation.
- This option will simplify the treatment of PIs, improving the NRC's efficiency and reliability Principles of Good Regulation.

The net changes to the treatment of inspection findings and PIs constitute a balanced regulatory change that does not have a negative impact on safety.

Cons:

- The regions may receive requests from licensees to schedule and complete supplemental inspections more quickly, increasing regional staffing and scheduling burden.
- The incentive for licensees to perform evaluations and inspection preparations more quickly could impact quality and potentially result in an increase in unsuccessful supplemental inspections on the first attempt.
- Since the PIs are supposed to be objective measures of licensee performance, the staff would need to communicate why the licensee is in Column 1 of the Action Matrix if the PI remains GTG after successful completion of the supplemental inspection, this source of potential confusion could decrease the clarity Principle of Good Regulation. The staff expects this scenario to be rare, because in most cases, the PI has returned to Green before the supplemental inspection has been completed.

Option 4: Maintain status quo

Under this option, the NRC would make no changes to the ROP assessment program.

Pros:

- There are currently very few GTG findings and PIs, so there may be no compelling reason to change the current treatment, and this option would require no resource effort.
- The average time it takes licensees to prepare for supplemental inspections for GTG findings is 91 days from final significance determination process letter to notification of readiness, and this time continues to decrease, so there may be no need to increase licensees' incentives to prepare for supplemental inspections for GTG findings.
- Under this option, the regions would not face potentially increased regional staffing and scheduling burden due to receiving additional requests from licensees to schedule supplemental inspections sooner.

Cons:

- This option does not address concerns over the increasing time it takes for licensees to prepare for supplemental inspections for GTG PIs.
- Once a licensee has corrected the causes of degraded performance as indicated by GTG findings and PIs, the baseline risk of the plant should return to normal. The current assessment process does not recognize real-time plant performance.
- This option does not address the complicated treatment of PIs that cross a significance threshold or the inconsistent treatment of GTG PIs and findings.

*Stakeholder Views on Assessment Program Changes*

Although the industry has expressed support for the proposal to close White findings upon satisfactory completion of the supplemental inspection, industry representatives oppose changing the treatment of PIs so that they remain Action Matrix inputs until the supplemental inspection is completed, and in particular after PIs return to Green. They perceive this as an increase in regulatory oversight. In a letter dated May 20, 2019 (ADAMS Accession No. ML19141A143), NEI described its objections to the proposed changes to the treatment of GTG PIs. NEI also presented several reasons for its opposition to the changes during the ROP working group public meeting on December 2, 2021 (ADAMS Accession No. ML21335A260).

NEI stated that PIs are meant to report current performance; if a PI is Green, it indicates nominal performance and should not count as an Action Matrix input. However, the NRC staff notes that a PI could return to Green without the licensee's having taken corrective action, which means it could cross the Green/White threshold again before the supplemental inspection was completed. On eight occasions, a PI has crossed the White threshold, returned to Green, and subsequently returned to White before or soon after completion of the supplemental inspection. As discussed above, GTG inspection findings continue to count as Action Matrix inputs until the licensee has corrected the underlying cause of the issue, and the staff believes it should treat PIs the same way.

Industry representatives also stated that PIs and inspection findings were never intended to be treated the same when the ROP was developed, but they provided no information to support that assertion. The industry's view is not consistent with IMC 0308, which states that "[c]rossing a PI threshold and an inspection threshold will have the same meaning with respect to safety significance and directly define the level of NRC involvement and action." The staff also notes that this change would benefit a licensee in a case where a supplemental inspection has been completed for a PI that remains White because of the way it is calculated. In such a case, the White PI would remain an Action Matrix input under the current process but would not be considered an Action Matrix input under the revised process, since the NRC verified the licensee took effective corrective action.

Some staff members have suggested that a PI that crosses a significance threshold should remain an Action Matrix input even if the supplemental inspection has been completed for that issue if the PI has not returned to Green. The view is that the proposed approach would remove a quantitative Action Matrix input (a GTG PI) based on qualitative inspection conclusions, which could weaken the assessment process by replacing PIs with staff judgment. However, other staff members have stated that since GTG inspection findings are closed based on qualitative inspection conclusions, GTG PIs should be closed on the same basis. In both cases, supplemental inspections ensure that the licensee has adequately addressed the causal factors that led to the significant Action Matrix inputs.

Some staff members have expressed a concern that if the NRC eliminates the minimum four-quarter requirement, regions may receive requests from licensees to schedule and complete supplemental inspections more quickly, increasing regional staffing and scheduling burden. Data analysis shows that the average time from licensee notification of readiness until satisfactory completion of the supplemental inspection is 63 days for White findings and 71 days for White PIs. Since it is not easy to predict when licensees will notify the NRC of their readiness for supplemental inspections, at times, it has been burdensome to schedule inspectors with the necessary expertise, given the finite resources available.

On August 7, 2019, the NRC staff issued a *Federal Register* notice (84 FR 38675) announcing a 60-day public comment period for the recommendations in SECY-19-0067, which included the recommendations presented in this paper. Among the responses, the Connecticut Department of Energy did not oppose the recommendations but urged caution in implementing the changes. NEI also responded, challenging the basis for the revision to the treatment of GTG PIs. NEI asserted that there were only five data points on GTG PIs from 2016 to 2019, which was an insufficient basis for the revision. To address this concern, the most recent staff analysis includes three additional data points since the original analysis that validate the staff recommendation.

The Union of Concerned Scientists stated that it agrees that GTG inspection findings and PIs should be treated consistently. However, it believes that in both cases GTG inputs should remain on the books for at least four quarters, so that they are not erroneously treated as isolated incidents when in fact they indicate widespread or systemic safety deficiencies. The supplemental inspection procedures all require inspection of the causal analyses and corrective actions for all GTG inputs.

#### RECOMMENDATION:

The staff recommends that the Commission approve Option 3. Both changes under Option 3 give licensees an incentive to prepare for supplemental inspections as soon as practicable. Also, the assessment process will be more risk-informed and reflective of real-time licensee performance because the plant risk profile will have returned to baseline risk when GTG PIs and findings have been corrected and inspected. Revising the treatment of PIs that cross a significance threshold will improve consistency and predictability within the ROP, and enhance the Principles of Good Regulation of clarity, reliability, and efficiency. The changes, if implemented together, represent a balanced approach to oversight, and they would simplify the assessment process in that all Action Matrix inputs would be treated consistently.

#### RESOURCES:

This paper does not address any new commitments or resource implications.

#### COORDINATION:

This paper has been coordinated with the Office of the General Counsel, which has no legal objection. This paper has also been reviewed by the Office of the Chief Financial Officer.



Signed by Dorman, Dan  
on 09/16/22

Daniel H. Dorman  
Executive Director  
for Operations

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**\* concurred via e-mail**

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