

NRC INSPECTION MANUAL

IPAB

INSPECTION MANUAL CHAPTER 0609, ATTACHMENT 05TP

INSPECTION FINDING REVIEW BOARD

Effective Date: November 15, 2016

1.0 PURPOSE

The purpose of the Inspection Finding Review Board (IFRB) is to provide a formal framework to obtain regional staff and management agreement on the proposed performance deficiency and to effectively manage the actions needed to reach a preliminary decision on the significance of inspection findings that do not screen to Green. This framework, through effective management oversight and project planning, aims to ensure that all involved regional managers and staff are fully aligned on the specific actions needed, the scope of the work to be done and the associated schedule to reach an informed decision on licensee performance deficiencies and their preliminary significance prior to conducting a Significance and Enforcement Review Panel (SERP).

This document will be used in conjunction with IMC 0609TP, "Significance Determination Process" and IMC 0609 Attachment 1TP, "Significance and Enforcement Review Panel (SERP) Process." These procedures are intended to enhance the efficiency of the SDP with an emphasis on improved management oversight and planning of greater than Green inspection findings involving the initiating events, mitigating systems and barrier integrity cornerstones. This test activity is scheduled to end not later than December 31, 2017.

2.0 APPLICABILITY

The IFRB is a regional activity that should be convened when inspection findings do not initially screen to Green using the various Significance Determination Process (SDP) screening tools. Specifically, if the finding does not screen to Green using IMC 0609 Appendix A or in phase 1 and 2 of IMC 0609 Appendices F, G, H, J, and K, the regional branch chief and the senior reactor analyst (SRA) shall determine if an IFRB is warranted (i.e., a straightforward issue that experience has shown will ultimately result in a Green determination would not require convening the IFRB). It is expected that IFRB meetings will be regularly scheduled and only held when needed (analogous to weekly allegation review board and enforcement meetings).

3.0 OBJECTIVES

- Ensure regional management and staff align on the licensee performance deficiency, the degraded condition, and how the performance deficiency is the proximate cause of the degraded condition.
- Ensure there is early alignment on the scope, schedule and involved resources to support an efficient and effective preliminary significance assessment on potentially greater than Green inspection findings.
- Provide a mechanism to effectively communicate with senior licensee management the inspection finding, support needed from their staff in reaching the preliminary assessment decision, and the appropriate timeframe to provide information.

4.0 GUIDANCE

The IFRB Finding Form (Exhibit 1 of this procedure) is used to document the receipt, evaluation, and IFRB decisions for inspection findings in the Initiating Events, Mitigating Systems and Barrier Integrity cornerstones that require a detailed risk evaluation (DRE) per the SDP for which the responsible branch chief and the SRA agree that the finding is complex and warrants early division-level management involvement (e.g., a straightforward issue that experience has shown will ultimately result in a Green determination would not require convening the IFRB).

Note: When making the decision on whether to conduct the IFRB, the branch chief and the SRA should bias their decision considering the need for experience during the trial implementation of the IFRB.

The IFRB should consist of the IFRB Chair, who will be the SES manager sponsor for the finding, the lead inspector, the SRA, the inspection branch chief, the DRP branch chief (if different from the inspection branch), and a regional enforcement specialist.

Exhibit 1 - IFRB Finding Form, serves as the basis for the discussion of the concerns during the IFRB. The first page of the form contains general information about the potential finding. Subsequent sections contain the performance deficiency details and evaluation (Section 1), inspection staff recommended action (Section 2) and IFRB decisions (Section 3), SERP and executive summary (Section 4), and SERP details (Section 5). The IFRB Finding Form shall be promptly sent to the cognizant inspection branch chief.

Exhibit 2 – Inspection and Significance Determination Process Metrics, is provided to illustrate the 255-day total period for greater than Green inspection findings to decide on the performance deficiency based on its proximate cause and to determine its final significance. The exhibit reflects the completion milestones of 120 days from the issue identification until the final exit, 45 days to issue the inspection report and 90 days to complete the SDP evaluation. The enforcement action metric of 120 days from the exit meeting to the final determination is also provided to illustrate that when enforcement is involved the total time is 240 days.

Exhibit 3 – Estimated Timeline for SDP Completion, is an editable file provided to show the process steps from the identification of an issue to the final SDP determination with an estimate of the time necessary to complete each step. This timeline shall be used by the IFRB in developing schedules for completing the evaluation of the finding. The milestones demonstrated on the timeline are ONLY considered estimates based on past experience with greater than Green inspection findings. All findings should be completed in an effective and efficient manner with a goal to complete all steps in less than 255 days. Additionally, it should be recognized that there are several steps which may be done concurrently.

Exhibit 4 - Inspection Finding Review Board Survey Questions, is a list of questions for all those involved in the IFRB process to address. The responses to these questions and the additional comments and suggestions provided by the IFRB participants will be used to assess the IFRB process for future improvements once the trial is completed.

4.1 IFRB Finding Form

a. IFRB Finding Form, Cover Sheet

1. Responsibilities for the Lead Inspector

- (a) General Information: Enter Facility Name, Docket/License #, EA Number and Responsible Inspection Branch.
- (b) Enter Event/Condition Report Date using the calendar drop-box. The other dates will auto-calculate. (Reference IMC 0307, Appendix A for guidance on determination of the event date).
- (c) Brief Overall Issue Summary: Provide a short summary of the degraded condition or issue of concern and how it was identified. Describe how the performance deficiency is the proximate cause of the degraded plant condition. Determine if the issue should be considered for an “old design issue.”
- (d) Licensee Corrective Actions: Describe the licensee corrective actions taken or compensatory measures established to ensure no ongoing safety concern exists. Has the licensee fixed the condition or implemented compensatory measures?

Note: Engage licensee immediately if actions have not been taken or are insufficient to address the safety concern.

2. Responsibilities for the Lead Branch in coordination with the SRA

- (a) Using the dropdown menu, select “Initial” or “Follow up” for IFRB Purpose.
- (b) If appropriate, provide a “Reason for IFRB” in the appropriate field. (e.g., revised performance deficiency; consider additional information obtained).

b. IFRB Finding Form, Section 1.

- 1. Performance Deficiency and Associated Violation: Provide a concise statement of the performance deficiency and associated violation. This is the version of the performance deficiency that, after approval by the IFRB, will be used at the SERP and documented in the inspection report.
- 2. Affected Structures, Systems, Components (SSCs) and/or Operator Actions: List the SSCs and/or operator actions that have been affected by the identified performance deficiency.
- 3. Affected Risk-Relevant Functions: Provide a complete list of all of the functions affected by the performance deficiency. The functions important to the SDP are the risk-relevant functions as described in documents such as the plant risk information e-book (PRIB), the NRC’s SPAR model, the historical SDP notebooks, or the licensees PRA. The functions may be different from the “specified safety function” as described in the plant’s UFSAR.

4. Initial SDP Screening: Determine which cornerstones are affected. Provide basis for more than minor determination. Provide the basis for why the finding does not screen in IMC 0609 Appendix A or in phase 1 and 2 of IMC 0609 Appendices F, G, H, J, K, as applicable.
5. Exposure Time: Enter the duration the degraded condition existed or is assumed to have existed if known at the time. Include both the start time and end time for the exposure period, along with the basis for the selection of these dates/times. Describe whether T or T/2 should be considered for the calculating the duration. Consult with the SRA to determine the Exposure Time in accordance with the Risk Assessment Standardization Project (RASP) Handbook.
6. Are External Events Likely to be the Main Risk Contributor (i.e., earthquake, fire, external flooding and tornados/high winds): Answer yes/no and if yes, describe the scenarios where the affected component(s) would be called upon.
7. Conditions When the Performance Deficiency Would Manifest Itself: Describe the type of accident, environmental conditions, plant configuration (as applicable) during which the performance deficiency would impact plant safety.
8. Is Recovery of the “Failed Function” Credible? Describe the conditions for which the licensee may be able to recover the function that was impaired or lost as a result of the performance deficiency. For example, if an operator action could be taken, is there training provided, procedures already established, and equipment necessary to take the action available. Is credit for FLEX equipment appropriate?
9. Describe How Current PRA Techniques and Tools and Tools Apply. Are the existing PRA models and techniques sufficient to adequately determine the issue significance? Which risk metric will be used for the SDP evaluation (delta CDF, delta LERF, CCDP)? If not, describe alternate means available or needed to determine significance.
10. Additional Issue Complexities, if any.
11. Licensee’s Perspective. Provide licensee’s position on the performance deficiency, if known.

c. IFRB Finding Form, Section 2

Note: Prior to the IFRB, the lead inspection branch completes the following sections.

1. Inspection Branch Recommendation: Provide a recommendation for disposition using the drop-down menu under the Inspection Branch Recommendations “Recommended Action” section. Select from the following options:
 - (a) Region completes the DRE. Proceed to SERP, if necessary. Select this option when the SRA has determined that the finding can be evaluated with

regional resources only. If possible, estimate a planned completion date for the DRE and planned SERP date. Coordinate with regional enforcement staff for the planned completion date(s).

- (b) Request additional resources. Proceed to Planning SERP. Select this option when resources outside the region are necessary for completing the DRE. Identify the additional resources required and form an SDP project team with all the individuals needed to complete the analysis. List those individuals on the IFRB Finding Form. Schedule a planning SERP and provide the date on the IFRB Finding Form. Complete Section 2A and conduct planning SERP in accordance with MC 0609, Attachment 1TP.

2. Section 2A: No additional guidance. Refer to the form directly.

d. IFRB Finding Form, Section 3.

Note: Following the IFRB, the lead inspection branch completes the following sections.

1. Document any additional pertinent discussion or comments resulting from the IFRB related to the issue, including actions and due dates, as applicable. Additional actions could include for example, gathering more information, additional evaluation of the PD, accelerated due dates.
2. If the PD discussed at the IFRB is not approved, determine what is required for approval, next steps, and document who is to complete the action. Determine if communication with the licensee is required, at the appropriate level, to complete any of the actions developed.
3. If the PD discussed at the IFRB is approved, the IFRB Chair shall contact the respective licensee senior management to inform them of the region's decision to move forward with conducting a detailed risk evaluation and/or a Planning SERP. The IFRB Chair shall advise the licensee manager that all subsequent management level communications on the finding should be discussed with the IFRB Chair.

e. IFRB Finding Form, Section 4, "SERP Worksheet."

Note: The lead inspection branch completes the following information in coordination with the SRA and presents it at the SERP.

1. All of the influential assumptions are understood by both the NRC technical staff and management (i.e., SERP decision-makers).
2. If an influential assumption has more than one equally valid input (e.g., a significant model uncertainty), sensitivity evaluations should be performed to appropriately account for all of the potentially valid outcomes (i.e., account for uncertainties). If each influential assumption only has one valid input, a technical basis should be provided to substantiate that value.

3. The NRC inspection staff and management understand the licensee's perspectives and insights, if provided, and have a reasoned basis for either incorporating (or not incorporating) each perspective or insight in the staff's evaluation.
 4. Taking into account guidelines a-c, the preliminary or final significance determination should be based on the need to make a timely regulatory decision given the best available information during that timeframe.
- f. IFRB Finding Form, Section 5.

Document all supporting details required for final significance determination. It is expected this section will be for SRA use only and not be included in the Executive Summary provided to the SERP decision makers unless requested.

4.2 Completion of Survey Questions.

Once the final decision is made on the finding's significance by issuance of the final determination letter, all involved parties shall complete Exhibit 4, Significance Determination Process Survey Questions. Once completed, the responses shall be provided to the applicable branch chief who will forward them to the NRR's Division of Inspection and Regional Support Inspections Performance Assessment Branch.

4.3 IFRB Documentation Retention.

IFRB packages presented at SERP shall be saved to the SERP package repository as described below. For the duration of the trial period, the lead inspection branch shall retain all other IFRB packages.

To access SERP packages in ADAMS:

1. Open ADAMS P8.
2. Click on search icon on the main ribbon.
3. Click on Advanced Search.
4. Add the following filters:
 - "Document Type" includes "Enforcement Action Worksheet"
 - "Docket Number" starts with "05000"
5. Click search.

END

EXHIBIT 1 – IFRB FINDING FORM

<u>IFRB Cover Sheet</u>			
Facility Name/Location: Choose an item.		Name of Utility or Licensee: Click here to enter text.	
Docket Number(s): Click here to enter text.		EA Number: EA-Click here to enter text.	
Responsible Inspection Branch/Sponsor: Click here to enter text.			
Event/Condition Report Date	120 days	165 days	255 days
Error! Reference source not found.	.	.	.
BRIEF OVERALL ISSUE SUMMARY:			
<i>Provide a short summary of the degraded condition or issue of concern and how it was identified. Describe how the performance deficiency is the proximate cause of the degraded plant condition.</i>			
LICENSEE CORRECTIVE ACTIONS:			
INSPECTION FINDINGS REVIEW BOARD INFORMATION			
IFRB Date: Click here to enter a date.		Previous IFRB Date: Click here to enter a date.	
Purpose of IFRB: Choose an item. <i>Provide reason for Follow-up IFRB if applicable (e.g., revised PD)</i>			
IFRB Participants: SES Chair: Click here to enter text. Lead Inspector: Click here to enter text. SRA: Click here to enter text. Inspection Branch Chief: Click here to enter text. Projects Branch: Click here to enter text. Regional Enforcement Specialist: Click here to enter text. Other(s): Click here to enter text.			

SECTION 1 – to be completed by responsible inspection branch in close coordination with senior reactor analyst

PERFORMANCE DEFICIENCY

Provide a concise statement clearly stating deficient licensee performance and degraded plant condition based on proximate cause. Ref IMC 0612 Section 03.02

Associated Violation (if applicable):
Click here to enter text.

Affected Structures, Systems, Components (SSCs) and/or Operator Actions:
Click here to enter text.

Affected Risk-Relevant Functions:
Click here to enter text.

Initial SDP Screening:
Click here to enter text.

Exposure Time:
Click here to enter text.

Are External Events Likely to be the Main Risk Contributor (i.e., earthquake, fire, external flooding, and tornados/high winds)? ☐Yes ☐No
If yes, describe the scenario where the component(s) would be called upon.

Conditions when the Performance Deficiency Would Manifest Itself (e.g., type of accident, environmental conditions, plant configuration):
Click here to enter text.

Is Recovery of the “Failed Function” Credible? ☐Yes ☐No
If yes, describe under what conditions.

Do Current PRA Techniques and Tools Apply? ☐Yes ☐No
If not, describe alternate means to determine significance.

Additional Issue Complexities, if any:
Click here to enter text.

Licensee’s Perspective of the Issue:
Include description of licensee’s position on the performance deficiency if known.

SECTION 2 – to be completed by inspection branch prior to IFRB

INSPECTION BRANCH RECOMMENDATION

PROPOSED ACTION		BASIS
<input type="checkbox"/>	Region completes the DRE. Proceed to SERP, if necessary.	
<input type="checkbox"/>	Request Additional Resources. Proceed to a Planning SERP. (Provide information below)	

SECTION 2A – to be completed ONLY if Planning SERP is to be conducted

Reason(s) sponsor request the Planning SERP:
Click here to enter text.

Any additional comments for Planning SERP considerations:
Provide any additional comments e.g., known conservatisms, significant uncertainties, influential assumptions.

Is the assessment expected to exceed any timeliness metrics? ☐Yes ☐No

If yes, please explain.

Proposed Scope, methodology, and level of effort:

Additional Resources Needed:

Expected Planning SERP Date: Click here to enter a date.

Recommended schedule for completion:

Additional Information required	Owner	Due date
		Click here to enter a date.
		Click here to enter a date.
		Click here to enter a date.

<u>SECTION 3</u> – To be completed at the IFRB			
IFRB Discussion and/or comments related to issue (if applicable): Click here to enter text.			
Performance Deficiency Approved: <input type="checkbox"/> Yes <input type="checkbox"/> No If No, provide additional actions required and schedule for return to IFRB. If Yes, contact licensee management.			
IFRB Decision:			
Date	Action	Owner	Due date
Click here to enter a date.			Click here to enter a date.
Click here to enter a date.			Click here to enter a date.
IFRB Chairman Signature:		Date: Click here to enter a date.	
If Performance Deficiency is approved, IFRB Chairman to contact licensee senior management and inform them of decision.		Date: Click here to enter a date.	

SECTION 4 – SERP WORKSHEET

To be completed by responsible inspection branch in close coordination with Senior Reactor Analyst

EXECUTIVE SUMMARY

Type of SERP: Choose an item.	Date of SERP: Click here to enter a date.
EA Number: EA-Click here to enter text.	IR Number: Click here to enter text.
Type of Inspection: Choose an item.	Inspection Procedure: IP Click here to enter text.

Proposed Enforcement Action:

Members

Finding Sponsor: Click here to enter text.

HQ Technical Spokesperson: Click here to enter text.

Reactor Inspection and Performance Assessment Program Spokesperson: Click here to enter text.

Enforcement Spokesperson: Click here to enter text.

Overview

Cornerstone: Choose an item.

☐ Provide justification for selected cornerstone, if multiple cornerstones are applicable: Click here to enter text.

Proposed Significance: Choose an item.

SDP Appendix: Choose an item.

Influential Assumptions:

List all of the influential assumption(s) that have a significant effect on the overall determination. Provide a technical basis for each influential assumption.

Uncertainty and/or Sensitivity Analyses:

Describe any uncertainties involved in the detailed risk evaluation. Based on the influential assumption(s), if there are additional valid values or inputs for an assumption, perform sensitivity analyses to demonstrate how the outcomes vary given changes in assumptions.

Risk Insights:

Describe the dominant sequences and any other risk insights.

Licensee's Perspectives/Analyses:

Provide any significant licensee technical, engineering, and/or risk perspectives that diverge from the staff's assumptions. Provide a justification for either incorporating or not incorporating the perspective(s) into the staff's determination. Note: Do not use CDF or LERF as metrics if Qualitative Appendix was used.

SECTION 5 – SERP PACKAGE DETAILS (SRA USE ONLY)

QUANTITATIVE SDP

Influential Assumptions:

Describe in detail any assumptions that cannot be substantiated to have a single value (i.e., a model uncertainty) and has a significant effect on the overall outcome. Some examples include exposure time, common cause failure, recovery credit, human error probabilities, failure phenomenology, and initiating event frequencies.

Uncertainty Analysis:

Identify any significant parametric, model, and completeness uncertainties. Any influential assumption that could reasonably have multiple valid values should be considered a model uncertainty and addressed via sensitivity evaluations. A model that is determined to be incomplete for the purposes of the analysis should be considered a completeness uncertainty and addressed via qualitative risk insights.

Sensitivity Evaluations:

All influential assumptions considered to be a model uncertainty should be analyzed with a sensitivity evaluation. Based on the number of significant model uncertainties, a sufficient number of sensitivity evaluations should be performed to account for all of the permutations. The results of the sensitivity evaluations could result in a variety of outcomes (i.e., different colors).

Contributions from External Events:

Describe any contributions from external events or hazards (e.g., seismic, external flooding, fire, high winds). If the contribution from an external event or hazard is significant ensure that an appropriate nominal risk profile is established.

Potential Risk Contribution from LERF:

Determine whether LERF is an appropriate metric to characterize the safety significance of the degraded condition. If so, describe how the degraded condition impacted the LERF metric.

Licensee's Risk Evaluation and Technical Analysis:

Describe any significant licensee technical, engineering, and/or risk perspectives that align or diverge from the staff's assumptions. Provide a justification for either incorporating or not incorporating the perspective(s) into the staff's determination.

Peer Reviewer(s) Recommendations:

List any peer reviewer recommendations that were not incorporated into the evaluation and provide a basis for the exclusion.

Significance Determination (i.e., Color):

State the recommended significance determination (i.e., color). Provide a critical argument that integrates all of the pertinent information (i.e., Δ CDF (or Δ LERF), sensitivity evaluations, qualitative risk insights) into a risk-informed decision.

References:

List any references that were used to support the inspection and/or risk evaluation (e.g., NUREGs, Industry Reports, Engineering evaluations, SPAR Model).

Qualitative Risk Considerations

List any additional qualitative insights to be considered

EXHIBIT 2 – INSPECTION AND SIGNIFICANCE DETERMINATION PROCESS METRICS

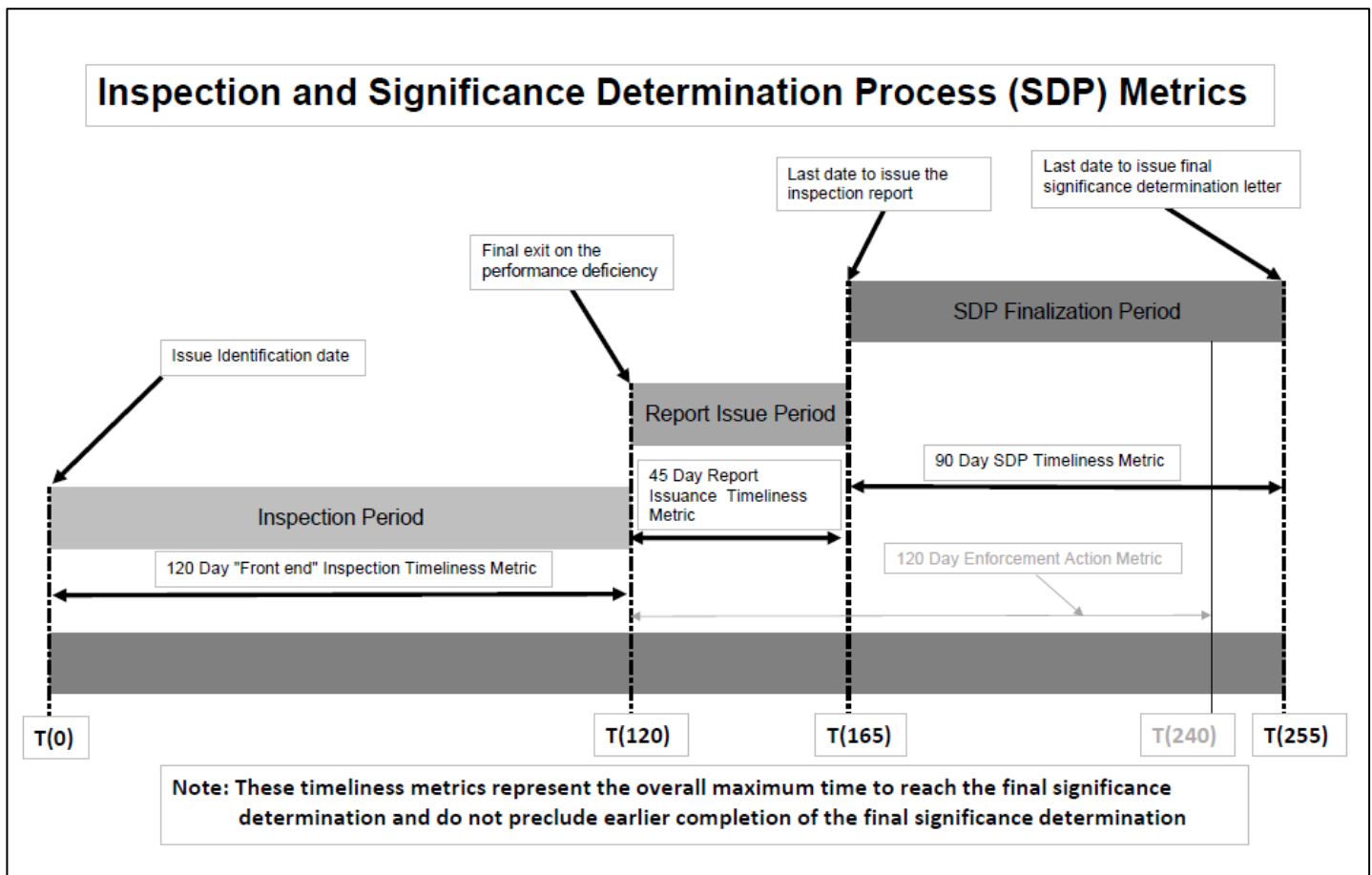


EXHIBIT 3 – ESTIMATED TIMELINE FOR SDP COMPLETION

ESTIMATED TIMELINE FOR SDP COMPLETION					
Est. time to complete activity	Activity	Metric	Metric Date	Actual Date	Comments
	Event/Condition Occurs	PD Metric: T=0		01/00/1900	
60 days	Licensee Evaluation complete, if needed				
6 weeks	Inspection Finding identified. SDP screening complete.				
	IFRB Conducted				
	Exit	PD Metric: T=120 IR Metric: T=0			
6 weeks	Detailed Risk Evaluation Complete				
7 days	NRR/DRA peer review complete. Submit package to Regional enforcement staff.				
7 days	IFRB (SERP) package submitted to Headquarters				
	SERP conducted.				
	Inspection report issued TBD	IR Metric: T=45 SDP Metric: T=0			
7 days	Preliminary Determination Letter Issued				
10 days	Licensee Response to Preliminary Determination Letter				
5 days	Meeting Notice Issued				
	Licensee Submits information prior to regulatory conference				
	Regulatory Conference				
7 days	Receive additional information requested at the regulatory conference				
14 days	Post-conference review and final determination				
	Approximate Enforcement Metric	T=240 (after IR issued)			
7 days	Final determination letter in concurrence				
10 days	Final determination letter ready for OE, NRR, Reg concurrence. EN issued.				
3 days	Final determination letter issued.	SDP Metric: T=90			

Note: These times are ONLY estimates based on past experience with more challenging and complex GTG inspection findings. Also, this is not a serial representation as some steps may be done concurrently.

EXHIBIT 4 – SIGNIFICANCE DETERMINATION PROCESS SURVEY QUESTIONS

Following issuance of the final significance determination letter for the GTG finding, it is expected that the involved division director, branch chief, lead inspector and SRA will all complete the following survey in order to evaluate the effectiveness of the procedure. The responsible branch chief will ensure that surveys are provided to the NRR/DIRS/IPAB Branch Chief.

EA Number: _____

Inspection Finding Review Board

1. Did the IFRB change the originally presented PD? After the PD was agreed upon in the IFRB, was the PD modified during the SERP? Did the PD change between the Preliminary Determination Letter and the final determination letter? If so, why?
2. Did the IFRB process help achieve efficiencies, such as reducing the number of different management briefings of the finding and better coordination of NRC managers with respect to communicating with the licensee?
3. How long after the PD was identified did the IFRB convene?
4. Was the IFRB chaired by the same division-level manager throughout the process (attending the IFRB, planning SERP, SERP, regulatory conference, post-conference review)?
5. Did the IFRB forms reduce the effort associated with preparing documents for planning SERP and SERP when compared to the existing forms?
6. Did the conduct of the IFRB have any unintended consequences?

Licensee Interactions

1. Did the IFRB Chairman inform licensee management of the outcome of the IFRB and the Region's plan to complete the SDP?
2. Did the use of the IFRB process facilitate improved interactions with the licensee? Why or why not?

Metrics

1. Were the 120 day, 45 day, and 90 day metrics met? If not, what were the reasons?

SERP Changes

1. Did all SERP members participate in the regulatory conference and did their participation improve decision-making?

2. Was the post-conference review less resource-intensive than a final SERP? Was it effective in achieving a final determination of significance?
3. Was having only one peer review by HQ appropriate? Did the peer review add particular value?
4. Was use of the virtual SERP meeting effective and did it result in a significant efficiency gain in the SERP process?

Suggested Changes to the IFRB Process

Based on the experience gained by using the IFRB process, provide any suggestions to improve the process to make it more efficient and effective taking into account any lessons learned.

Attachment 1 – Revision History Table for IMC 0609 Attachment 05TP

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment and Feedback Resolution Accession Number (Pre-Decisional, Non-Public)
	ML16103A405 10/28/16 CN 16-028	This is a new inspection manual chapter developed as part of an NRC initiative to improve the efficiency and effectiveness for making decisions on greater than Green inspection findings. This document will be used throughout a test phase which is expected to be completed by December 31, 2017, if not sooner.	Presentations were made in three regional offices prior to procedure issuance. In addition, question and answer sessions will be conducted shortly after the procedure is issued.	ML16110A211