

# NRC INSPECTION MANUAL

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## INSPECTION PROCEDURE 71152

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### PROBLEM IDENTIFICATION AND RESOLUTION

Effective Date: January 1, 2022

PROGRAM APPLICABILITY: IMC 2515 A, 2201 A

CORNERSTONES: ALL

INSPECTION BASIS: See IMC 0308 Attachment 2, "Technical Basis for Inspection Program," Figure 37, "Identification and Resolution of Problems/Issues Basis Summary Sheet (IP 71152)"

#### SAMPLE REQUIREMENTS:

Sample Requirements		Minimum Baseline Completion Sample Requirements		Budgeted Range	
Sample Type	Section	Frequency	Sample Size	Samples	Hours
Baseline PI&R Review	03.01	NA	NA	NA	10-15 percent*
Semiannual Trend Review	03.02	Semiannual	2	2	20 +/- 4 hours
Annual Follow-up of Selected Issues	03.03	Annual	4	4 to 8	71 +/- 10 hours (1 Unit) 74 +/- 10 hours (2 Units) 77 +/- 10 hours (3 Units)
Biennial Inspection Team	03.04	Biennial	1	1	250 +/- 38 hours

\* Inspection time spent assessing PI&R as part of the baseline procedure attachments should be charged to the corresponding baseline procedure.

#### 71152-01 INSPECTION OBJECTIVES

01.01 To evaluate the effectiveness of the licensee's **problem identification and resolution (PI&R)** program in identifying, prioritizing evaluating, and correcting problems.

01.02 To confirm that licensees are complying with NRC regulations regarding corrective action programs (**CAP**).

- 01.03 To help the NRC gauge supplemental response when **Reactor Oversight Process (ROP)** Action Matrix thresholds are crossed.
- 01.04 To confirm the licensee's appropriate use of industry and NRC operating experience.
- 01.05 To evaluate the effectiveness of licensee audits and self-assessments.
- 01.06 To confirm licensees have established a safety conscious work environment (**SCWE**).
- 01.07 To follow-up on corrective actions for selected previously identified compliance issues (e.g., non-cited violations (NCVs)).
- 01.08 *To verify that licensees are identifying and placing potential 10 CFR 21—REPORTING OF DEFECTS AND NON-COMPLIANCE issues into the (CAP) and appropriately evaluating them. [C3]*

## 71152-02 GENERAL GUIDANCE

The PI&R inspections should follow a performance-based approach to the extent possible. Inspectors should evaluate products and results of the licensee's **PI&R** program, including the use of operating experience, assessments, and audits. Inspectors should focus on the results associated with risk-significant issues. For the issues that are determined to be performance deficiencies, inspectors should evaluate the causes that relate to cross-cutting aspects for insights on performance. Inspections performed in accordance with this procedure should focus on the identification of problems and the effectiveness of corrective actions for risk-significant issues rather than the administrative aspects of the **PI&R** program and associated procedures.

The Office of Nuclear Reactor Regulation, Division of Operating Reactors, Quality Assurance and Vendor Inspection Branch should be notified via email when issues related to potential vendor or supplier deficiencies are reviewed. Include the vendor's name and provide a brief description of the deficiency and/or component, as appropriate

### 02.01 Sample Selection Guidance.

Inspectors should seek the broadest range of examples from the cornerstones of safety when selecting inspection samples. Inspectors can obtain insights for determining appropriate samples from discussion with resident or regional inspectors who are familiar with the site's issues, PI&R program, and previously inspected areas. In selecting issues for review, inspectors should also use relevant risk insights, such as maintenance rule program basis documents, current licensee risk analysis results or insights, licensee system health reports, and **the Plant Risk Information eBook (PRIB) found in the site-specific SPAR model.**

Inspectors should consider including samples from the sources listed below. The sample-selection guidance is intended to help ensure that the NRC can obtain insights into a licensee's **PI&R** program throughout an assessment cycle.

- a. Licensee-identified issues, including issues identified during audits or self-assessments, and licensee event reports. The review of licensee event reports should be coordinated with the resident inspectors to effectively utilize inspection resources during the biennial team inspection. Include a sample of corrective actions that were considered having the highest priority including those constituting **significant conditions adverse to quality**

(SCAQs). The licensee's root cause analyses associated with these items should be assessed using the inspection guidance contained in IP 95001, "Supplemental Inspection **Response to Action Matrix Column 2 (Regulatory Response) Inputs**," as an aid.

- b. Completed self-assessments/audits, including quality assurance program audits performed to satisfy 10 CFR 50, Appendix B, Criterion XVIII. **Inspectors should** determine if the results are consistent with the data collected during this inspection and whether the audits and self-assessments are effectively identifying problems. Verify that any substantial differences that exist between results from the subject assessment/audit and the results of previous assessments/audits are reasonable. Review the licensee's response to the assessments/audits to determine if corrective actions were tracked, timely, and appropriate for resolving identified issues.
- c. Quality assurance audits can be an important source of problem identification. When reviewing quality assurance audits inspectors should be familiar with the licensee's quality assurance topical report/ Quality Assurance Plan and the associated industry standards that the Quality Assurance Plan commits to in order to determine if the audits are appropriately identifying problems in the Appendix B area the audit is focused on. If the inspector finds inconsistencies between the conclusions of the audit and the conclusions of the PI&R team, several cycles of audits for that area should be reviewed to determine if the audits were of sufficient depth and scope to adequately assess the appropriate Appendix B audit area. The collective result of all the Appendix B, Criterion XVIII, quality assurance audits for the two-year cycle should be to "verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the quality assurance program." The PI&R team should assess the identified inconsistencies to determine if the quality assurance audits are appropriately identifying problems.
- d. *Safety culture assessments. A licensee's evaluation of specific cross-cutting aspects, cross-cutting areas, functional departments, or levels (e.g., supervisors or non-supervisory workers) may constitute a safety culture assessment review. Licensee safety culture self-assessments may also be reviewed in accordance with Section 02.03 of this IP as an annual follow sample [C2].*
- e. Issues related to cited and non-cited violations and documented findings. During the biennial inspection, **inspectors should** review the licensee's response to a sample of NCVs in each cornerstone unless no NCVs were identified in the cornerstone.
- f. Issues identified through NRC and industry operating experience exchange mechanisms (e.g., NRC generic communications, reports associated with 10 CFR 21, nuclear steam system supplier vendor reports, Electric Power Research Institute reports, and operating experience reports from similar facilities, NRC Operating experience smart samples).
- g. NRC-identified issues during baseline, supplemental, and reactive inspections. Discuss such issues with respective NRC inspectors and management as part of inspection preparations. **If appropriate**, the biennial team inspection **should** review licensee corrective actions associated with greater than green inspection findings **and performance indicators** that were not completed by the conclusion of the associated supplemental inspection and which have not been previously completed and subsequently reviewed. A review of all licensee completed corrective actions for greater than green findings **and performance indicators** provides additional assurance that the

licensee's completed corrective actions for risk- significant performance issues are sufficient to address the root and contributing causes and prevent recurrence.

- h. Issues captured in databases operated and/or maintained by the site's corporate office. A site's corporate office may track such issues in a database(s) separate from the site's **PI&R** program. Inspectors may choose to view the contents of such a database(s) to ensure that issues and operating experience are communicated to affected sites owned or operated by or associated with the corporate entity. Should an issue be identified on site that warrants follow-up and that issue is captured in the corporate **PI&R** program, then that issue and the licensee's handling of it should be reviewed, even though it is a corporate **PI&R** program issue. A review of corporate corrective actions programs can identify important information affecting multiple sites, such as those identified with bio-diesel fuel for which NRR issued Information Notice (IN 2009-02) for example.
- i. Cause analyses and corrective action documentation associated with **structures, systems, and components** (SSCs) or functions classified as (a)(1) status in accordance with the Maintenance Rule (10 CFR 50.65). **Inspectors should** review the licensee's trending analysis associated with these SSCs/functions to determine whether the licensee's **PI&R** program should have enabled the identification and correction of the adverse trend prior to the SSC/function obtaining (a)(1) status.
- j. Cross-cutting issues and other issues identified by safety review committees or other management oversight mechanisms.
- k. *Issues identified through alternative avenues, such as employee concerns or similar programs* [C2]. Note that some members of the licensee staff may not have authorized access to information about issues that are captured in these programs. Inspectors should accordingly protect this information from disclosure to any unauthorized personnel. In particular, inspectors should limit any verbal and/or written discussions to only those licensee staff that have access rights to the subject records and to inspection team members that have a need-to-know. Inspectors may need to restrict access to portions of the exit or debrief meetings as appropriate.
- l. Issues that challenge operator performance including but not limited to: operator work arounds, Main Control Room deficiencies, operator burdens and challenges, night orders/standing orders, temporary logs, control room and/or equipment operator logs, and work requests/work orders dealing with long standing issues. Inspectors should also review the corrective actions associated with failed SSCs that resulted in prompt and final operability evaluations.
- m. Issues that may be age-related (e.g., due to aging effects such as loss of material, loss of preload, or cracking). Plants with renewed licenses have established aging management programs (AMPs) to identify, address, and/or prevent aging effects prior to loss of intended function for those SSCs within the scope of the AMP. When inspecting degradation or failures that appear to be age-related, inspectors should, in addition to other inspection activities, determine whether the SSC is being managed by an AMP. If so, the inspector should also determine whether the activities in the AMP are adequate to identify the aging effect prior to loss of SSC intended function, and whether the licensee's corrective actions address the adequacy of the AMP. Consult with the regional license renewal point of contact for support in evaluating the adequacy of the AMP.

- n. Fatigue-related issues identified through fitness for duty effectiveness reviews or licensee assessments reports, see 10 CFR 26.717(9). Refer to IP 93002, “Managing Fatigue” for additional guidance.

## 02.02 Performance Attributes.

When evaluating the effectiveness of a licensee’s corrective actions for a particular issue, the nature and (potential) significance of the identified problem must be considered. While licensees may appropriately consider monetary, plant availability, and other factors when determining significance, the potential impact on nuclear safety and risk should be the primary factors in the licensee’s classification and prioritization of corrective actions. Attributes to consider during the baseline PI&R review, semiannual trend review, annual follow-up of selected issues, and biennial team inspection are listed below. Inspectors are not expected to assess each attribute for every issue selected for follow-up during routine reviews, semiannual trend reviews, or during the annual follow-up of selected issues. Instead, inspectors may choose to assess licensee performance against selected attributes, as necessary, to be most effective. Inspectors can also refer to IP 95001 for additional guidance on assessing licensee evaluations of significant performance issues.

- a. Complete, accurate, and timely documentation of the identified problem in the **PI&R** program.
- b. Evaluation and timely disposition of operability and reportability issues. Refer to IMC 0326, Operability Determinations, for additional guidance.
- c. Consideration of extent of condition and cause, generic implications, common cause, and previous occurrences.
- d. Classification and prioritization of the problem’s resolution commensurate with the safety significance.
- e. Identification of root and contributing causes of the problem. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management. Inspectors may use guidance contained in IP 95001 as an aid in assessing the adequacy of licensee root cause analyses.
- f. Identification of corrective actions that are appropriately focused to correct the problem (and to address the root and contributing causes for significant conditions adverse to quality).
- g. Completion of corrective actions in a timely manner commensurate with the safety significance of the issue. Included within this attribute would be justifications for extending corrective action due dates and interim corrective actions if permanent corrective actions require significant time to implement.
- h. Action taken results in the correction of the identified problem. In the case of significant conditions adverse to quality, the corrective action taken shall preclude repetition.
- i. Identification of negative trends associated with human or equipment performance that can potentially impact nuclear safety. (semiannual trend and biennial team inspection only)

- j. Operating experience is adequately evaluated for applicability, and applicable lessons learned are communicated to appropriate organizations and implemented.
- k. Self-assessments and audits are effective at identifying issues, which are evaluated and resolved commensurate with their significance. (biennial team inspection only)
- l. For NRC-identified issue(s), evaluate whether opportunities to identify the problem(s) by the licensee were missed in the past and if prior attempts by the licensee to remedy the problems were adequate. (biennial team inspection only)

NOTE: Issues identified during the Baseline PI&R review and semiannual trend may be deferred to an annual follow-up of selected issues or the biennial team inspection.

### 02.03 Documentation Guidance.

The level of documentation for PI&R inspection activities differs from that used for other baseline inspection activities by allowing the documentation of observations and assessments.

- a. **Baseline PI&R Review.** Completion of a baseline inspection procedure scope constitutes completion of the baseline PI&R review.
- b. **Semiannual Trend Review.** On a semiannual basis, a section should be added to the quarterly integrated inspection report to document the inspectors' observations and assessments of trends that might indicate the existence of a more significant safety issue as they relate to the performance attributes discussed in Section 02.02. The level of documentation for the trend review should include trends that might not rise to the level of an inspection finding.
- c. **Annual Follow-up of Selected Issues.** The basis for the selection and the scope of review of each sample should be documented in the integrated inspection report. In general, issues associated with PI&R programs should also be documented in the report. This documentation should include factual information that relates to the performance attributes discussed in Section 02.02 if that information indicates licensee performance weaknesses. This documentation standard is different from the standard used to document issues elsewhere in the quarterly integrated inspection reports. Assessments of PI&R program effectiveness will not be performed during these inspections – such assessments will be performed only during the biennial team inspection. Technical issues associated with other inspectable areas and cornerstones should also be documented in those sections of the report.
- d. **Biennial Team Inspection.** At the completion of inspection activities, the team should develop a clear and concise discussion of the results of their review. This discussion should also be supported by the inspection activities, including those activities from the baseline PI&R reviews, semiannual trend reviews, and annual follow-up of selected issues, conducted since the last biennial assessment of the licensee's PI&R program. The discussion should be documented in the inspection report for the biennial team inspection. IMC 0611, Appendix D provides additional specific and unique guidance beyond that contained in IMC 0611 for documenting the biennial PI&R inspections.

## 02.04 Biennial PI&R Inspection Planning

Inspectors should obtain licensee administrative procedures that control the identification, evaluation, and resolution of problems. Selected licensee documents needed to support the inspection may be obtained prior to the inspection. These documents should only be reviewed to provide the inspectors with sufficient knowledge of the licensee's programs and processes, as necessary, to conduct an effective and efficient inspection.

Inspectors should obtain and review documents for the in-office review, such as a list of corrective action documents issued from the time of the last biennial team inspection (e.g., a list of work orders, work requests, temporary modifications, calibration failures, condition/problem identification reports, operability evaluations and determinations, etc.). In addition, inspectors should obtain relevant licensee PI&R program assessments, program performance information, trend reports, and licensee safety culture assessments. Refer to IMC 0620, "Inspection Documents and Records" for more information on requesting documents for inspection preparation.

Inspectors should obtain and review all NRC inspection reports issued since the last biennial team inspection to determine:

- the extent to which licensee actions in response to NCVs and findings have been sampled by routine reviews of licensee PI&R activities, and
- if any trends or patterns in PI&R program or performance issues warrant additional sampling to confirm. For example, a series of issues associated with "failure to follow procedures" within one cornerstone may indicate a corrective action performance deficiency within a portion of the licensee's organization; a series of issues associated with failure to follow procedures in multiple cornerstones may indicate a broader concern. Also, a lack of licensee-identified corrective action issues within a particular organization may be indicative of a problem with the identification threshold. Consider the need to follow-up on performance trends documented as a result of the semiannual trend review.

PI&R activities are reviewed in four locations within the baseline inspection program: baseline reviews; semiannual trend reviews; follow-up of selected issues; and biennial team inspections as discussed in the following sections.

03.01 Baseline PI&R Review.

**Conduct a review of licensee PI&R activities during the conduct of baseline inspection procedures to verify that the licensee has identified equipment, human performance, and program issues at an appropriate threshold, entered them into the PI&R program, classified them in accordance with licensee procedures, and has taken appropriate corrective actions [C1].**

Specific Guidance

Most of the baseline IPs contain a requirement to inspect PI&R performance within the IP's subject area. The inspection of PI&R performance as part of baseline IPs is intended to ensure that over the course of an assessment cycle, a sample of PI&R performance in all cornerstones is obtained. The primary focus of this portion of the PI&R review should be on verifying that licensees are identifying issues at an appropriate threshold and entering them into their PI&R program. However, inspectors are not precluded from review of corrective action documents once they have been dispositioned to identify potential areas for further inspection. Inspectors should consider PI&R insights when selecting baseline inspection samples and may follow-up on PI&R issues as part of a baseline inspection procedure's PI&R review.

Inspectors should compare issues identified by the NRC during the conduct of the inspectable area portions of the baseline inspection program IPs with issues identified by the licensee. Additionally, inspectors can follow-up on selected issues and operational occurrences to ensure that corrective actions commensurate with the significance of the issues have been identified and implemented by the licensee.

Inspectors should be alert for potential performance deficiencies as may be associated with equipment failures, inadequate maintenance work practices, personnel errors, inadequate risk assessments, management and emergent work control problems, procedure deficiencies, or non-compliances with procedures or regulatory requirements. When inspectors identify such conditions, they should examine the licensee's PI&R program records and/or attend licensee PI&R program meetings to verify that the licensee either previously identified and documented the conditions noted by the inspector or acknowledged the inspector's observations and entered those conditions into the PI&R program.

### 03.02 Semiannual Trend Review

**Perform a semiannual review of licensee PI&R program documents (e.g., issue tracking databases, licensee audits, and self-assessments) to identify potential trends (either NRC- or licensee-identified) that might indicate the existence of a more significant safety issue.**

#### Specific Guidance

*The scope of this review should include repetitive or closely-related issues that may have been documented by the licensee outside the normal corrective action program, such as: trend reports or PIs, major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenge lists, issues that challenge operators in performing duties (e.g., workarounds), system health reports, quality assurance audit/surveillance reports, self-assessment reports, maintenance rule assessments, or corrective action backlog lists. [C1]*

Additionally, consider a review of corrective action documents which have been dispositioned to identify potential adverse trends in structures, systems, and components (SSCs) as evidenced by acceptance of long-standing non-conforming or degraded conditions. Such indicators could include “use-as-is” determinations, revision of engineering or operational acceptance criteria, reductions in design or operational margin, and repetitive work orders.

Inspectors should consider emerging or existing cross-cutting themes during the semi-annual trend review to develop insights into the licensee’s progress in addressing the themes. *Inspectors can perform this review by summarizing the results of the licensee’s reviews and comparing those results to those identified by the NRC through the baseline or supplemental inspection program, including issues identified as a result of the daily review of PI&R program items discussed in [Inspection Manual Chapter 2515, Appendix D](#). If a biennial team inspection is scheduled within six months of the semiannual review, the senior resident inspector could forward any concerns to the PI&R team. This information should be incorporated into the scope of the team inspection. [C1]*

### 03.03 Annual Follow-up of Selected Issues.

**Perform an in-depth review of selected issues to ensure that the licensee has planned and/or implemented corrective actions commensurate with the significance of the identified issues.**

#### Specific Guidance

These samples may be reviewed throughout the annual assessment cycle. Inspectors should use the guidance contained in Section 02.01 as an aid in selecting samples for review. *Inspectors should review the selected samples against the performance attributes contained in Section 02.02 of this IP.* [C1]

The samples should generally be representative of multiple cornerstones of safety. These issues can be chosen from, but not limited to, information obtained from condition report reviews and reviews conducted as part of the baseline IPs. Inspectors may also select an issue that is tracked by a PI for which a threshold level change has yet to occur. Inspectors may select issues associated with cross-cutting areas as samples.

Following the issuance of an assessment letter identifying a cross-cutting issue (CCI), the licensee's progress in addressing the issue should be evaluated as an annual sample. Inspectors should also consider one of the annual samples to be a follow-up on emerging or existing cross-cutting themes to develop insights into the licensee's progress in addressing the themes. The review should be scheduled at a time that will provide meaningful input to the assessment process.

*Defects and non-conforming materials, parts, or components may present a substantial safety hazard. Inspectors should consider using an annual follow-up sample to inspect defects or non-conforming conditions for compliance with 10 CFR 50, Appendix B and 10 CFR 21. Inspectors may refer to IP 36100, "10 CFR Part 21 Inspections at Nuclear Power Reactors" and IP 43004, "Inspection of Commercial-Grade Dedication Programs" for additional guidance.* [C3]

IP 71111.12, "Maintenance Effectiveness," instructs inspectors to evaluate corrective actions associated with equipment subject to the Maintenance Rule (10 CFR 50.65). This IP also instructs inspectors to consider applicability of 10 CFR 50, Appendix B, Criterion XVI for equipment subject to the requirements of 10 CFR 50, Appendix B, especially when the corrective action-related requirements of 10 CFR 50.65(a)(1) may not be applicable. If inspectors identify potential PI&R program weaknesses during implementation of IP 71111.12 that require additional focus beyond the expectations of IP 71111.12, inspectors may select the issue as a sample for PI&R annual follow-up.

### 03.04 Biennial Team Inspection.

Perform a biennial team inspection of PI&R program as described below. Note any contribution that cross-cutting aspects make to performance deficiencies and consider insights that these issues may provide into the licensee's progress in addressing any developing or existing cross-cutting themes.

- a. **Review a sample of licensee PI&R program items. Samples selected must include sample types "a" through "f" of Section 02.01. For a subset of the chosen samples, expanded the scope of the review to at least five years.**

#### Specific Guidance

*Use risk insights to select issues that have been processed through the licensee's PI&R program since the last biennial team inspection. To the extent available, the samples selected should include:*

1. *SCAQs and conditions adverse to quality (CAQ) that are documented in the licensee's PI&R program,*
2. *cited or non-cited violations of regulatory requirements and other documented findings,*
3. *issues identified through NRC operating experience,*
4. *issues identified through industry operating experience that are documented in the licensee's PI&R program, and*
5. *licensee audits and assessments. [C1]*

The biennial inspection team leader should choose as many issues for review as warranted to complement the routine PI&R reviews and ensure a sufficient basis for evaluating the effectiveness of the licensee's PI&R program. *Inspectors can review Institute of Nuclear Power Operations (INPO) findings, recommendations, corrective actions, and operating experience that are documented in the licensee's PI&R program. Inspectors may refer to the NRC/INPO Memorandum of Agreement, dated November 14, 2005 (ML060060035), for guidance prior to reviewing any INPO documents. [C1]*

1. *The samples chosen for review should include a range of issues selected from the list in Section 02.01, including those sample types that are designated as requiring a mandatory review. For a subset of the samples chosen for review, the scope of the review should be expanded to at least five years. Among the samples chosen for this extended review should be those issues whose significance might be age-dependent, such as issues associated with erosion of piping, degradation of safety-related raw water systems, boric acid accumulations, aging of electronic components, environmental qualification, etc. This review can be performed by requesting the licensee to perform a PI&R program search (computerized or other) for those items designated by the team for the five-year review. [C1]*

2. *If the licensee conducted any periodic self-initiated assessments of safety culture during the review period, this assessment shall be included along with other non-safety culture self-assessments selected to review. If the licensee performed several assessments that collectively addressed safety culture issues, then those assessments combined should be considered as one assessment. [C2]*

Inspectors should review the adequacy of the licensee's evaluation and actions to address the issues identified by the safety culture assessment. Not all actions necessarily need to be handled within the licensee's corrective action program under 10 CFR 50, Appendix B, Criterion XVI. It may be more appropriate for some issues that are not conditions adverse to quality to be tracked to resolution through an alternate licensee program such as an employee concerns program. The inspectors review should focus mainly on the licensee's response to the assessment results or actions taken to address identified issues instead of the assessment methodology or an evaluation the assessment's adequacy. Section 03.04.c provides more guidance on reviewing the licensee's safety culture assessment from the SCWE perspective.

3. When the licensee has been requested by the NRC to perform an independent safety culture assessment, inspectors shall evaluate the licensee's assessment.
4. Inspectors should consider emerging or existing cross-cutting themes for review during the biennial team inspection to develop insights into the licensee's progress in addressing the themes.
5. Inspectors may select one or more risk-significant systems on which to focus sample selections. Performing a walkdown of selected systems in accordance with the guidance provided in IP 71111.04, Equipment Alignment, Section 02.02, Complete Walkdown will provide insight into the adequacy of the licensee's implementation of all aspects of the **PI&R** program (identification, prioritization, evaluation and implementation). However, in cases where this method for sample selection is used, additional issues may be required to be reviewed to ensure adequate coverage in the Emergency Planning Cornerstone and the Radiation Safety or Safeguards Strategic Performance Areas.

**b. Review each selected issue using the performance attributes contained in Section 02.02 of this IP.**

Specific Guidance

None

**c. Review the results of recent audits and self-assessments related to the licensee's corrective action and quality assurance programs.**

Specific Guidance

Inspectors should compare and contrast the identified problems and corrective actions being taken as a result of these audits and self-assessments with the results of this inspection.

- d. **Review issues that pose challenges to the free flow of information for adequate resolution.** [C2] Employees should feel free to raise safety concerns, both to their management and to the NRC, without fear of retaliation.

Specific Guidance

*When conducting interviews with or observing other activities involving licensee personnel and/or long-term contractors (i.e., those that have been working at the site for at least six months) during the inspection, inspectors should be sensitive to areas and issues that may represent challenges to the free flow of information, such as areas where employees may be reluctant to raise concerns or report issues in the PI&R program. [C2]*

To assess the licensee's environment for raising concerns, and to determine whether impediments exist to the establishment of a SCWE, inspectors should interview a number of licensee personnel and, if applicable, long-term contractors. These interviews should focus on the willingness of these personnel to raise safety concerns to supervisors/management or through the PI&R program, their knowledge of alternative avenues for raising concerns, and whether they have experienced or heard of anything perceived as retaliation for raising concerns.

Inspectors may conduct these interviews by one of several methods: as a supplement to other discussions with personnel about PI&R issues, as standalone one-on-one interviews with select personnel, or by conducting focus group interviews. Focus group interviews are permissible only when the inspector facilitating the focus group has received training in conducting focus groups; it is strongly preferred that the facilitator be qualified as a Safety Culture Assessor per IMC 1245 Appendix C12.

During inspection preparation and performance, readily available indications of licensee SCWE (e.g., licensee SCWE survey results, NRC allegation data, licensee employee concerns program records, Nuclear Safety Culture Monitoring Panel inputs, and resident input) should be reviewed to determine an appropriate scope for assessing the SCWE via on-site interviews and/or focus groups. To the extent practicable, personnel interviewed should be mostly nonsupervisory and should represent a cross-section of the licensee's organizational departments (e.g., operations, maintenance, engineering, security, etc.). If possible, the experience levels of the personnel should vary; both newer and mid-career individuals should be included. Focus group interviews should similarly cover a cross-section of the licensee's organizational departments and should include people with a variety of experience levels. Each focus group should only include personnel at the same supervisory level and may be supplemented by individual discussions with managers or supervisors.

Appendix A to this procedure provides a list of questions that may be used to assess SCWE in interviews or focus groups.

Interviewing long-term contractors would allow inspectors to assess the SCWE of a group of individuals that have worked at the site for extended periods of time and impacted plant operations and safety. Inspectors should also obtain insights about the SCWE during their review of the licensee's most recent safety culture and other relevant assessments. Inspectors should be sensitive to similarities and differences between the results of their SCWE interviews with plant staff and the results of the licensee's safety culture and other relevant assessments.

Although the licensee may be implementing an employee concerns or similar program regarding the identification of safety issues, the possibility of existing underlying factors that would produce a "chilling" effect or reluctance to report such issues could exist, and inspectors should be alert for such indications. Such factors could include but not be limited to direct retaliation, inadequate staffing that results in excessive overtime, an unwillingness to raise issues that might result in further increases to an already high workload, or inadequate corrective actions for previously identified issues causing personnel to be reluctant to identify additional related issues.

If inspectors become aware of (1) instances of employees being discouraged from raising safety or regulatory issues within the licensee's or contractor's organization or to the NRC, (2) a "chilling" effect, or (3) other general reluctance of employees to raise safety or regulatory issues unrelated to a specific event or incident, they should refer to IP 93100, "Safety Conscious Work Environment Issue Follow-up" and consult with regional management to determine appropriate follow-up actions.

- e. **Review corrective actions related to greater-than-green findings and performance indicators that were not completed by the end of the associated supplemental inspection and were not otherwise reviewed.**

Specific Guidance

None

- f. **Assess the following items using the results developed from steps a through e:**

- **the effectiveness of the licensee's PI&R program in identifying, evaluating, and correcting problems,**
- **the licensee's use of operating experience information,**
- **completed licensee audits and self-assessments, and**
- ***the licensee's SCWE in order to identify any indications of reluctance to report safety issues by licensee personnel. [C2]***

Specific Guidance

By reviewing a sufficient number and breadth of samples, the inspection team should be able to develop insights into the licensee's ability to identify, evaluate, and resolve problems using the PI&R program, operating experience, and results of self-assessments/audits. Inspectors should compare these results with the licensee's performance reviews, including reviews of PI&R programs. Inspectors should determine whether licensee reviews are consistent with the NRC review of PI&R issues.

The intent of this IP (both the routine and biennial inspection effort) is to provide insights into licensee performance in the PI&R area based upon a performance-based review of corrective action issues, operating experience, and self-assessments/audits. More detailed programmatic reviews of licensee performance in the PI&R area will be conducted during supplemental inspections if established performance thresholds are crossed.

71152-04 REFERENCES

Audit of NRC's Implementation of 10 CFR Part 21, Reporting of Defects and Noncompliance (OIG-11-A-08, March 23, 2011, ML110820426)

IMC 0305, "Operating Reactor Assessment Program"

IMC 0308 Attachment 2 "Technical Basis for Inspection Program"

IMC 0326, "Operability Determinations and Functionality Assessments for Conditions Adverse to Quality or Safety"

IMC 0611, "Power Reactor Inspection Reports"

IMC 0620, "Inspection Documents and Records"

IP 36100, "10 CFR Part 21 Inspections at Nuclear Power Reactors"

IP 43004, "Inspection of Commercial-Grade Dedication Programs"

IP 71111.12, "Maintenance Effectiveness"

IP 93002, "Managing Fatigue"

IP 93100, "Safety Conscious Working Environment Issue Follow-up"

IP 95001, "Supplemental Inspection Response to Action Matrix Column 2 (Regulatory Response) Inputs"

Nuclear Regulatory Commission Enforcement Manual

NRC/INPO Memorandum of Agreement, dated November 14, 2005 (ADAMS ML060060035)

END

Appendix A: Guidance for Gathering SCWE and PI&R Insights

Attachment 1: Revision History

## Appendix A – Guidance for Gathering SCWE and PI&R Insights

The following are suggested questions that may be used when discussing PI&R issues with licensee individuals. It is not intended that these questions are asked verbatim, but rather, that they form the basis for gathering insights regarding whether there are impediments to the formation of a SCWE.

In cases where a potential problem with SCWE is identified in response to these questions, inspectors should consult with regional management to determine if inspection resources should be applied using IP 93100, “Safety Conscious Work Environment Issue Follow-up” to gain additional SCWE insights.

### Suggested Questions

#### **Problem Identification and Resolution Program (PI&R):**

1. How effective is the PI&R program in addressing problems?
2. Do you think it's worth taking time to place problems found into the PI&R program? Why or why not?
3. When you enter an issue into the process, do you receive any feedback when it's been discussed or addressed? Are you satisfied with this level of feedback?
4. Are there informal means you would use to address issues found, other than the official PI&R program? If so, please provide some examples.
5. Can anyone at the site (contractor, security officer, etc.) enter an issue into the PI&R program? When someone enters an issue into the PI&R program, does the entry have to be approved by a supervisor? (If yes, does this affect what gets put in the PI&R program?)

#### **Environment for Raising Concerns (SCWE):**

1. Are you aware of any situations where any employee or contractor may have been hesitant to raise concerns or feared a negative consequence for raising a concern? What kind of concerns? Can you give some examples?
2. How do you and your colleagues feel about expressing their opinions? How do you think management receives and addresses opinions and viewpoints?
3. In your opinion, if employees don't receive a response that they are satisfied with, are they able to escalate their concern to a higher level of management? If no, why not? Is escalation of concerns encouraged by management? If so, how?
4. Have there been any issues recently (2 years) that would affect your willingness to raise safety issues or your confidence in the PI&R program? Please provide examples.
5. How do you feel about using ECP? Are you confident about confidentiality?
6. Do you feel free to bring concerns to the NRC without fear of retaliation?

7. How does your management encourage the use of alternate avenues (ECP) for raising safety concerns?
8. Does your management seem to put what you believe to be the appropriate emphasis on safety (nuclear, radiological, and industrial)? Please provide examples.
9. When production goals (schedules) are set, how are they communicated to you? What is management's reaction when a safety concern is raised that affects the schedule and thus the production goal is not met?

**Preventing, Detecting and Mitigating Perceptions of Retaliation (SCWE):**

1. Does the station have a policy concerning maintaining a work environment where workers can raise safety concerns without fear of retaliation? What does it say, in general? Would you say that your management is supportive of the policy?
2. Are you aware of any actions taken by your management to prevent and detect retaliation and/or other behaviors that could cause workers to be hesitant to raise safety concerns, that is, behaviors that could cause a chilling effect? If so, please provide examples.
3. Have your perceptions about this issue changed over time particularly over the last one to two years?
4. Are you aware of any instance in which someone on site has experienced a negative reaction from a supervisor or manager for raising a safety issue? If so, please provide examples.

END

Attachment 1: Revision History for IP 71152

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)
N/A	03/06/2001 <a href="#">CN 01-006</a>	Revised to delete certain inspection requirements (collective risk of maintenance backlog and equipment unavailability accounting), eliminate duplication within the procedure, and provide additional guidance concerning the review of a safety conscious work environment.	N/A	N/A
N/A	01/17/2002 <a href="#">CN 02-001</a>	Revised to include changing the inspection frequency to biennial and add guidance on the conduct of inspections of 3 to 6 samples per year outside of the team inspections.	N/A	N/A
C1	09/08/2003 <a href="#">CN 03-032</a>	Revised to incorporate recommendations made by the PI&R focus group to address several items from the Davis Besse Lessons Learned Task Force. The changes include enhanced requirements regarding the routine PI&R reviews conducted by resident inspectors, biennial reviews of longstanding issues, and biennial reviews of operating experience issues.	Yes 09/24/2003	N/A
N/A	<a href="#">ML053490187</a> 01/05/2006 <a href="#">CN 06-001</a>	A requirement to inspect for cumulative effects of operator workarounds to IP 71152 as one of its annual samples was added. Also, the annual sample size and the estimate inspection resources required to complete this IP were increased to support review of operator work-arounds. Completed historical CN search.	N/A	N/A

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)
N/A	<a href="#">ML061560498</a> 06/22/06 <a href="#">CN 06-015</a>	<p>Guidance added for procedure completion regarding annual sample size.</p> <p>Procedure now requires that the time spent to review condition reports to be charged to IP71152 instead of the plant status procedure.</p> <p>Hours have been increased for condition report reviews.</p> <p>Incorporate safety culture initiatives described in Staff Requirements - SECY-04-0111, "Recommended Staff Actions Regarding Agency Guidance in the Areas of Safety Conscious Work Environment and Safety Culture," dated August 30, 2004.</p>	N/A	<a href="#">ML061570086</a>
C2			Yes 1/7/2006	
N/A	<a href="#">ML070720179</a> 09/20/07 <a href="#">CN 07-029</a>	IP 71152 has been revised to add guidance on NRC use of INPO documents.	N/A	<a href="#">ML071560246</a>
N/A	<a href="#">ML073540265</a> 01/10/08 <a href="#">CN 08-001</a>	IP revised to address ROP Feedback Form 95001-1125 and some enhancements identified by the Problem Identification and Resolution Best Practices draft report.	N/A	<a href="#">ML073540274</a>

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)
N/A	<a href="#">ML093270053</a> 02/26/10 <a href="#">CN 10-008</a>	This revision incorporates: Resolution of ROP feedback forms: 71152-1314 (increased sensitivity to handling of confidential ECP information), -1322 (optional review of corporate databases to select samples), -1381 (interviewing long-term contractors for SCWE insights) and -1474 (budget hour correction). An additional inspection attribute for the Biennial Team Inspection to address a 2007 External Survey Comment. Added an additional 4 hours of inspection resources per the 2009 ROP Realignment Results (ML092090312).	N/A	<a href="#">ML100050386</a>
N/A	<a href="#">ML101090438</a> 08/18/11 <a href="#">CN 11-013</a>	Added an inspection requirement to inspect completed corrective actions for greater than green inspection findings (feedback form 71152-1449), and added additional guidance related to the review of quality assurance audits (feedback form 71152-1400). Added reference to IP 93100, "Safety Conscious Working Environment Issue Follow-up" and provided additional guidance for follow-up (FF 71152-1561), provided additional guidance for inspectors in the selection of condition reports for the routine and semi-annual reviews (FF 71152-1626).	N/A	<a href="#">ML111870499</a>
N/A	<a href="#">ML112360542</a> 12/05/2011 <a href="#">CN 11-039</a>	Added guidance for license renewal age management programs. Add requirement to verify applicable 10 CFR 21 notifications entered into the licensee's CAP. Added sample selection guidance and references related to inspecting defects and nonconforming materials, part, or components. Resources changed to reflect the 2011 ROP Realignment ( <a href="#">ML11178A329</a> ).	N/A	ML11332A016

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)
C3	<a href="#">ML13030A098</a> 01/31/13 <a href="#">CN 13-004</a>	Added guidance ensures that potential Part 21 issues are evaluated on a continual basis. This and CN 11-039 guidance and an associated objective pertaining to 10 CFR 21 are established as commitment C3.	N/A	
	<a href="#">ML13179A365</a> 08/13/13 <a href="#">CN 13-017</a>	Relocated some of documentation guidance related to the biennial PI&R inspection contained in Section 03.07 of this IP to IMC 0612 App D to eliminate redundancy and possible guidance conflicts.	N/A	
	ML14316A042 02/26/15 CN 15-003	Relocated Operator Work-around inspection requirement to IP 71111.15; enhanced alignment of 71152-01 INSPECTION OBJECTIVES with IMC 0308 Att. 2 Fig. 37; enhanced IP organization; aligned language to updated IMC 0310 nomenclature; enhanced communications with the NRC Vendor Inspection Center of Expertise for vendor or supplier deficiencies; updated references to external IP's and IMC's and eliminated reference to retired RIS 2005-20; eliminated use of undefined terminology; and enhanced integration of OpE Smart Samples into inspection sample population. This revision addresses or partially addressed FBF's 71152-1787, -1836, -1946, -1964, -2012, -2013, and -2022.	N/A	<a href="#">ML14287A039</a> ML15027A203 ML15027A208 ML15027A211 ML15027A215 ML15027A219 ML15027A222 ML15027A228

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)
	ML21281A181 12/14/21 CN 21-040	Revised to IMC 0040 format. Transferred requirements, commitments, guidance, and resources for daily review of Problem Identification and Resolution items to IMC 2515, Appendix D, "Plant Status" as recommended by the Comprehensive Review of the Problem Identification and Resolution Program (ML20247J602). Additionally, select feedback forms were resolved at this time as determined appropriate to the limited content revision. No additional changes to guidance or content in this revision. Additional recommendations and feedback forms will be incorporated into the next revision.	N/A	ML21281A182 71152-1718 ML21291A166 71152-1833 ML21291A167 71152-1841 ML21291A168 71152-1842 ML21291A169 71152-1870 ML21291A170 71152-2020 ML21291A171 71152-2291 ML21291A172