

# NRC INSPECTION MANUAL

IPAB

## INSPECTION PROCEDURE 71151

### PERFORMANCE INDICATOR VERIFICATION

Effective Date: 01/01/2017

PROGRAM APPLICABILITY: 2515A

#### 71151-01 INSPECTION OBJECTIVE

##### 01.01 Background

Inspection Manual Chapter (IMC) 0308, Attachment 1, "Technical Basis for Performance Indicators," describes the PIs and their objectives, thresholds, and bases and Reactor Oversight Process (ROP) cornerstone attributes covered by the PIs. The current revision of the Nuclear Energy Institute (NEI) document, NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," that has been accepted by the NRC for use in reporting PI data, describes the PIs, how they are calculated, and how and when to report PIs to the U.S. Nuclear Regulatory Commission (NRC). NRC Regulatory Issue Summary (RIS) 2000-08, "Voluntary Submission of Performance Indicator Data," Revision 1, informs stakeholders that the NRC accepts NEI 99-02 for use in reporting PI data.

PI data are voluntarily submitted by licensees to the NRC; however, information provided to the Commission by a licensee shall be complete and accurate in all material respects subject to 10 CFR 50.9. The assessment of plant performance relies on information provided by PIs. NEI 99-02 describes the PI data elements that are reported to the NRC. PI verifications will be planned inspections during which an inspector will review a sample of plant records and data against the reported PIs.

##### 01.02 Objective

To perform a periodic review of performance indicator (PI) data to **verify** their accuracy and completeness.

#### 71151-02 INSPECTION REQUIREMENTS

The minimum requirements for verification for each PI is described below. NEI 99-02 has complete definitions of the PIs and how they are calculated and reported.

**02.01 IE01: Unplanned Scrams per 7000 Critical Hours Sample.** Inspectors shall compare the number of scrams reported in Licensee Event Reports (LERs) to the number reported for the PI. Verify the accuracy of the reported number of critical hours.

- 02.02 IE03: Unplanned Power Changes per 7000 Critical Hours Sample. Inspectors shall review the appropriate licensee documents to verify that the licensee counted power changes appropriately. Verify the accuracy of the reported number of critical hours.
- 02.03 IE04: Unplanned Scrams with Complications (USwC) Sample. Inspectors shall review LERs and operating logs to determine if scrams that occurred are complicated and reported for this PI.
- 02.04 MS05: Safety System Functional Failures (SSFFs) Sample. Inspectors shall determine how many SSFFs were reported in accordance with 10 CFR 50.73(a)(2)(v). The inspector shall compare this to the number of SSFFs reported in the PI.

02.05 MS06: Emergency AC Power Systems

Unavailability Index (UAI): For the monitored trains or segments in the system being verified, inspectors shall verify through sampling that the licensee is correctly recording planned and unplanned UA hours. Inspectors shall compare this data to MSPI data sheets and Consolidated Data Entry (CDE) derivation reports in order to verify that the number of planned and unplanned UA hours were accurately reported in accordance with NEI 99-02.

Unreliability Index (URI) and Performance Limit (PLE): For all monitored components in the system being verified, inspectors shall review Corrective Action Program (CAP) and engineering documents to verify that failures, with the appropriate failure mode, were recorded correctly. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that component failures were accurately reported for unreliability and the PLE in accordance with NEI 99-02.

02.06 MS07: High Pressure Injection Systems

UAI: For the monitored trains or segments in the system being verified, inspectors shall verify through sampling that the licensee is correctly recording planned and unplanned UA hours. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that the number of planned and unplanned UA hours were accurately reported in accordance with NEI 99-02.

URI and PLE: For all monitored components in the system being verified, inspectors shall review CAP and engineering documents to verify that failures, with the appropriate failure mode, were recorded correctly. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that component failures were accurately reported for unreliability and the PLE in accordance with NEI 99-02.

02.07 MS08: Heat Removal Systems

UAI: For the monitored trains or segments in the system being verified, inspectors shall verify through sampling that the licensee is correctly recording planned and unplanned UA hours. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that the number of planned and unplanned UA hours were accurately reported in accordance with NEI 99-02.

URI and PLE: For all monitored components in the system being verified, inspectors shall review CAP and engineering documents to verify that failures, with the appropriate failure mode, were recorded correctly. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that component failures were accurately reported for unreliability and the PLE in accordance with NEI 99-02.

#### 02.08 MS08: Heat Removal Systems

UAI: For the monitored trains or segments in the system being verified, inspectors shall verify through sampling that the licensee is correctly recording planned and unplanned UA hours. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that the number of planned and unplanned UA hours were accurately reported in accordance with NEI 99-02.

URI and PLE: For all monitored components in the system being verified, inspectors shall review CAP and engineering documents to verify that failures, with the appropriate failure mode, were recorded correctly. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that component failures were accurately reported for unreliability and the PLE in accordance with NEI 99-02.

#### 02.09 MS09: Residual Heat Removal Systems

UAI: For the monitored trains or segments in the system being verified, inspectors shall verify through sampling that the licensee is correctly recording planned and unplanned UA hours. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that the number of planned and unplanned UA hours were accurately reported in accordance with NEI 99-02.

URI and PLE: For all monitored components in the system being verified, inspectors shall review CAP and engineering documents to verify that failures, with the appropriate failure mode, were recorded correctly. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that component failures were accurately reported for unreliability and the PLE in accordance with NEI 99-02.

#### 02.10 MS10: Cooling Water Support Systems

UAI: For the monitored trains or segments in the system being verified, inspectors shall verify through sampling that the licensee is correctly recording planned and unplanned UA hours. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that the number of planned and unplanned UA hours were accurately reported in accordance with NEI 99-02.

URI and PLE: For all monitored components in the system being verified, inspectors shall review CAP and engineering documents to verify that failures, with the appropriate failure mode, were recorded correctly. Inspectors shall compare this data to MSPI data sheets and CDE derivation reports in order to verify that component failures were accurately reported for unreliability and the PLE in accordance with NEI 99-02.

- 02.11 BI01: Reactor Coolant System (RCS) Specific Activity Sample. Inspectors shall review a sample of RCS chemistry sample analyses for maximum dose equivalent Iodine-131 and verify that the percentage of the Technical Specification (TS) limit is the same or lower than the maximum value reported by the licensee for the applicable month.
- 02.12 BI02: RCS Leak Rate Sample. Inspectors shall compare applicable licensee records (e.g., operating logs) of daily measurements of RCS identified (or total, if applicable) leakage to reported PI data to verify it is reported correctly.
- 02.13 EP01: Drill/Exercise Performance (DEP) Sample. Inspectors shall determine whether the licensee reported the correct number of total opportunities to perform classifications, notifications, and protective action recommendations (PARs). Inspectors will sample the opportunities to ensure the licensee correctly reported timely and accurate classifications, notifications, and PARs.
- 02.14 EP02: Emergency Response Organization (ERO) Drill Participation Sample. Inspectors shall verify that all members of the ERO in the key positions identified have been counted in the reported PI data. Inspectors shall review the licensee's basis for reporting the percentage of members who have participated. Inspectors shall review a sampling of drill attendance records to verify those reported as participating.
- 02.15 EP03: Alert And Notification System (ANS) Reliability Sample. Inspectors shall review siren test records for the previous reporting periods and compare the number of failures to the reported PI value to ensure it is accurate.
- 02.16 OR01: Occupational Exposure Control Effectiveness Sample. Inspectors shall review licensee records for High Radiation Area HRA, VHRA, and unplanned exposure occurrences and verify they were counted in the PI.
- 02.17 PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample. Inspectors shall review CAP records, LERs and annual release reports for liquid or gaseous effluent releases and verify that all occurrences were counted in the PI.
- 02.18 PP01: Protected Area Security Equipment Performance Index Sample. Certain information related to the Security Cornerstone PI is not publically available. Inspectors shall refer to non-publicly available IMC 0308, Attachment 6, "Basis Document for Security Cornerstone of the Reactor Oversight Process," for additional information on this PI.

## 71151-03 INSPECTION GUIDANCE

When conducting the first PI verification inspection (e.g., for a new PI or for a new site for which the PIs are applicable), the inspector should verify the accuracy of all data that are used to calculate the reported value.

Inspectors should sample the accuracy and completeness of PI data reported to the NRC since the last verification inspection.

For some PIs, it may be appropriate to observe the collection of PI data to ensure that data collection techniques will produce accurate results and therefore accurate PI data. As necessary and when possible, inspectors should use the most appropriate baseline IP sample to observe the plant activity that generates the PI data. The inspector may charge time spent on these observation activities to the other procedures and count those samples towards the baseline program. Specific suggestions for complimentary inspections for PIs are provided below.

### 03.01 IE01-IE04: Initiating Events PI Guidance

Inspection of operator and equipment performance in response to a scram is covered by IP 71153 for event follow-up. During LER closure review, inspectors may also elect to verify if scrams were reported under appropriate PIs.

### 03.02 MS05: SSFFs

A SSFF PI report can not occur without an associated LER. Inspectors may elect to verify whether SSFFs should be reported for the PI when performing LER closure review under IP 71153. If a reported SSFF was not counted for the PI, ensure the licensee appropriately applied exceptions allowed per NEI 99-02.

For a multi-unit site, the inspector should verify that the SSFF PI data **was** reported for all units for which an SSFF was applicable. If the LER mentions other units in the "Other Facilities" field but SSFF PI data were not submitted for the other units, the inspector should determine whether the SSFF was applicable to the other units and should also have been counted in the other units' PI data. The inspector should verify that the licensee reported the applicable LER number associated with the SSFF in the PI data comments.

The inspector should verify that the licensee correctly applied the clarifying notes from NEI 99-02 (especially the "engineering analyses" note). If a licensee checks the 10 CFR 50.73(a)(2)(v) box on the LER but doesn't report the SSFF in the PI data because of an engineering analysis, the inspector should verify whether the licensee appropriately invoked that exclusion and **that** assumptions in the engineering analysis are valid. The inspector should verify that the licensee appropriately considered the definition of an SSFF in the analysis.

Additional information on SSFF reporting and operability determinations can be found in:

- Title 10 of the *Code of Federal Regulations*, part 50, section 73(a)(2)(v), (10 CFR 50.73(a)(2)(v))
- NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73"

- IP 71111.15, “Operability Determinations and Functionality Assessments”
- IMC 0326, “Operability Determinations & Functionality Assessments for Conditions Adverse to Quality or Safety”

### 03.03 MS06-MS10: MSPI

It is recommended that inspectors compile discovered instances of failures or unavailabilities identified during daily CAP review, plant status or other inspections throughout the sample period for use when performing the MSPI verification sample. Inspectors could utilize IP 71111.04, IP 71111.12, IP 71111.13, IP 71111.19, or other appropriate IP samples in the process of gathering MSPI data. The guidance for functional failures under the maintenance rule and MSPI is different so a maintenance rule preventable functional failure does not necessarily mean a component failure or the monitored train was unavailable for MSPI.

Inspectors may visit the NRR/DIRS/IPAB PI SharePoint page to refresh their knowledge of MSPI (<http://fusion.nrc.gov/nrr/team/dirs/ipab/pi/default.aspx>).

#### PRA Changes

If there have been any changes to the licensee’s PRA model since the last MSPI verification inspection, the inspector should confirm that the MSPI basis document and INPO CDE were updated such that the changes were incorporated into the next quarterly reported data. The basis document can be confirmed by checking the revision history. CDE can be checked by correlating the coefficients in the derivation reports to the basis document. If the basis document was not updated within the specified timeframe, the licensee should have evaluated that no significant impact on the MSPI results would have occurred. Further guidance on requirements for PRA updates is found in the new NEI 99-02 App. G as revised by FAQ 14-01. The inspector may refer to the clarifying notes in NEI 99-02, Section 2.2. The inspector should verify any changes to the system and train/segment boundaries are defined in the plant’s MSPI basis document in accordance with Sections F.1.1.1 and F 1.1.2 of NEI 99-02. Licensees rarely change the planned UA baseline value. If this does occur, inspectors should review the basis for the change. Section F.1.2.2 of NEI 99-02 has additional information on baseline planned UA.

The inspector should review any MSPI component risk coefficient (i.e., Fussell-Vesely or Birnbaum value) that has changed from the last revision by more than 25% of its value. This review is not intended to be an inspection of the licensee’s PRA. Inspectors should confirm the causes for changes greater than 25% (model corrections, modifications, etc.). NEI 99-02 specifies licensees to report any change to these coefficients and note the change in the PI data comment field with their quarterly PI data submittal. Additionally, if estimates were used, an update to the estimated component demands in the MSPI basis document is required if a change to the basis for the estimated demands results in a greater than 25% change for the component of concern. The inspector should ensure that the licensee notified the NRC in accordance with the guidance contained in NEI 99-02 by placing a comment in the PI data comment

field upon submittal of the quarterly PI data. The inspector should be alert to risk coefficient changes that could impact components within the system boundary or trains that were exempted from monitoring. The inspector should review any changes to the success criteria or risk-significant function for any monitored component to ensure that the change was appropriate.

If inspectors have concerns with a licensee's PRA changes, they should work with a senior risk analyst to answer outstanding questions. Questions regarding implementation of NEI 99-02 guidance should be referred to NRR/DIRS to determine if an FAQ should be submitted.

### UAI Guidance

For trains/segments with a significant number of outages during the sample period, inspectors do not have to verify all hours are reported correctly but should focus on unplanned or extended planned unavailability to ensure they were correctly accounted. If the monitored system's trains/segments can accrue a large number of UA hours without a significant impact on the overall PI, due to the quantified low risk significance, a simple check that the reported UA hours appear reasonable will suffice.

UA is monitored at the train/segment level. If the actual number of planned UA is less than the baseline number, then the baseline UA is used in the MSPI calculation. The planned baseline UA is established by the licensee based upon scheduled maintenance and testing. Inspectors shall verify any changes made to planned unavailability baseline data are made in accordance with Section F 1.2.2 of Appendix F of NEI 99-02. If the actual number was more than the baseline number, then the actual number should have been used in the MSPI calculation. Licensees do not do this for unplanned UA, which could result in a negative reported number for UAI if the actual unplanned UA is less than the baseline. The generic industry baseline unplanned unavailability values in Section F.1.2.3 of Appendix F of NEI 99-02 do not change. Failures of any systems, structures, or components that are outside of the defined system boundary only affects UAI if those failures result in inoperable or non-functional trains/segments of the MSPI system.

Based on the update to NEI 99-02 provided by FAQ 15-03, licensees may exclude low risk trains with adjusted Birnbaum values of less than  $1.0E-07$  from unavailability monitoring. Inspectors should verify the licensee has correctly excluded trains in accordance with the guidance found in FAQ 15-03 and Appendix F of NEI 99-02.

### URI Guidance

URI is monitored at the component level and calculated at the system level. The sum of component failures for a system are inputted into CDE along with baseline failure numbers to calculate URI. There are three separate failure modes for components each with separate risk worths (Birnbaum values); fail on demand, fail to load, fail to run.

Section F.2.3.6 of NEI 99-02 has guidance on how to calculate these values. These values rely on the number of component demands and run-hours. Overestimating the demands and run-hours for a monitored component can affect the projected reliability of the monitored component. Inspectors should verify whether the licensee uses actual data or estimates for demands and run-hours. If the licensee uses actual data, inspectors should **check** that the licensee is **correctly tabulating demands and run hours**. If the licensee uses estimates, inspectors should **check** that the estimates are reasonable by comparing these values to those from surveillance test results and operational/alignment actions. The estimated demands from tests should be steady; however, the operational/alignment actions estimate may vary over time. Section F.2.2.1 of NEI 99-02 has additional guidance.

Demands and failures on demand for monitored at-power functions that occurred while the reactor was shut down are included in MSPI. **Failures during post maintenance tests should not be included, unless the failure cause is determined to be independent of the maintenance activity. NEI 99-02 Appendix F has specific guidance for when failures do and do not require to be counted.**

#### 03.04 BI01: RCS Specific Activity

While not specifically required, inspectors **may choose to observe a reactor coolant sample in accordance with IP 71111.22 to ensure licensees are collecting the required PI data adequately.**

#### 03.05 BI02: RCS Leak Rate

Inspectors **may choose to observe the surveillance activity that determines RCS identified (or total, if applicable) leakage rate in accordance with IP 71111.22 in order to ensure that licensees are collecting the required PI data adequately.**

**Some plants (typically BWRs) have a TS limit for total – rather than identified – RCS leakage. For these plants, inspectors should verify that the total leakage amount is being reported in their PI data.**

#### 03.06 EP01: Drill/Exercise Performance (DEP)

To verify the accuracy of the reported opportunities, inspectors **should review all actual emergency plan implementation events and evaluated exercise opportunities and a sample of drill and training evolution opportunities. Inspectors should also review a sample of failed opportunities to classify, notify, and develop PARs and verify that the licensee appropriately entered the issues into its CAP. Inspectors should verify that that the first offsite notification was made within 15 minutes in order to be counted as successful as required by NEI 99-02.**

**These verifications may be completed as samples under IP 71114.01 and IP 71114.06.**

03.07 EP02: Emergency Response Organization Drill Participation

To verify the accuracy of the reported percentage of key ERO members that have participated in a drill, exercise, or actual event during the previous eight quarters inspectors should verify number of key ERO members and the number of key ERO members who have participated in a drill/exercise in last eight quarters. Inspectors should also review a sample of drill attendance records to verify the number reported as having participated.

03.08 EP03: Alert And Notification System Reliability

Inspectors should observe siren testing in accordance with the IP 71114.02. Inspectors should be aware of instances of pre-conditioning and an increase in the number of subsequent unscheduled tests performed after a siren failure.

03.09 OR01: Occupational Exposure Control Effectiveness

Inspectors should verify that greater than or equal to one Roentgen per hour (R/hr) HRA TS or 10 CFR 20 non-conformances were properly captured in the PI. Inspectors should review radiologically controlled area (RCA) exit transactions with exposures greater than 100 milli-roentgen equivalent man (mrem) and review a sample (ten or more) of these exposures to determine whether they were within the radiation work permit specifications. Inspectors should verify that greater than 100 mrem unplanned exposures were entered in the CAP and counted in the PI.

During plant tours, resident inspectors should verify that HRAs and VHRAs are properly secured (e.g., doors are maintained locked). Residents should refer issues to regional inspectors to ensure any deficiencies with control of HRAs (greater than 1 R/hr) are appropriately included in the PI. Any resident inspection should be charged to Plant Status or other IPs as appropriate.

03.10 PR01: RETS/ODCM Radiological Effluent Occurrences

Samples from IP 71124.06, "Radioactive Gaseous and Liquid Effluent Treatment," should be used to observe the calibration of equipment used in this program.

During plant tours, resident inspectors should note any potentially unmonitored release pathways, as well as plant incidents involving leaking radioactive liquids or gases that are not bounded by plant collection systems and could be potential unmonitored release paths. Residents should ensure any deficiencies are entered into the CAP and refer issues to regional inspectors to verify the accuracy of PI data input.

03.11 PP01: Protected Area Security Equipment Performance Index

The Commission has decided that certain information related to the Security Cornerstone PI will not be publically available. Inspectors can refer to non-publicly available IMC 0308, Attachment 6, "Basis Document for Security Cornerstone of the Reactor Oversight Process," for additional information on this PI.

### 03.12 Inspection Results and Documentation

Standards and Requirements. PI data reporting is voluntary for licensees. Licensees have self-imposed standards for reporting PI data to the NRC that do not constitute regulatory requirements. Although PI data reporting to the NRC by a licensee is voluntary, it is subject to the requirements of 10 CFR 50.9, "Completeness and accuracy of information."

Dispositioning Discrepancies. A PI discrepancy is a difference between what was supposed to be reported in accordance with the current version of NEI 99-02 (e.g., the number of occurrences of scrams, unplanned power changes, or equipment/system unavailability/failures) and what was reported by the licensee in its PI data submittals. PI discrepancies could be caused by licensee errors in data collection or interpretation of NEI 99-02.

If the inspector or licensee identifies any PI discrepancies, the inspector should discuss the results with the licensee, verify that the licensee submits a change report to correct the PI data in accordance with NEI 99-02, and verify that the licensee enters the discrepancies into the CAP. Inspectors shall screen and disposition any issues of concern associated with PI reporting in accordance with IMC 0612, Appendix B. A PI discrepancy can be a performance deficiency in accordance with IMC 0612 and a violation of 10 CFR 50.9 for impacting the regulatory process and therefore can have traditional enforcement aspects. The NRC Enforcement Policy provides examples of violations associated with information reporting. The Enforcement Policy also provides direction for minor violations that the licensee fails to correct. The inspector can consult with the regional enforcement coordinator and an enforcement specialist in the NRC headquarters program office for determining the severity level of PI-related traditional enforcement violations.

If the discrepancy results in the PI exceeding a threshold or affects the ROP Action Matrix column, the inspector should notify regional management to determine what further action is required. The inspector and regional management should review the entrance criteria in IP 71150, "Discrepant or Unreported Performance Indicator Data." Factors to consider when deciding to perform IP 71150 include whether the licensee is correcting the PI data errors, the effectiveness of those corrective actions, the repetitiveness of the errors, and any trends in the quality of PI data reporting. The decision to perform IP 71150 should be discussed during the plant performance reviews described in IMC 0305, "Operating Reactor Assessment Program" and IMC 2515, Appendix C, "Special and Infrequently Performed Inspections."

Differences in Interpretation of NEI 99-02. It is expected that licensees will make reasonable, good faith efforts to comply with the guidance in NEI 99-02. This includes taking appropriate and timely action to identify and report performance issues captured by the indicators. It may be necessary for inspectors to exercise some judgment on the adequacy of licensee actions to make a reasonable, good faith effort to comply with the guidance.

If the inspector and the licensee disagree on whether a PI discrepancy exists because of a difference in interpretation of NEI 99-02, the issue may need to be resolved using the PI FAQ process described in NEI 99-02. NRC inspectors should contact the ROP PI Program Lead in the Performance Assessment Branch if a licensee intends to submit an FAQ. If feedback from the program office supports the inspector's position, the inspector may need to notify the licensee of the intent to consider the PI discrepant. The licensee should either correct the error or submit an FAQ to be introduced at the next ROP public meeting. The inspector should verify that the licensee captures the inspector's concerns accurately; as the inspector's concerns will also be discussed at the meeting. The inspector can open an unresolved item if the FAQ is not resolved by the end of the inspection period. Refer to IMC 0612 for additional guidance on documenting unresolved items. Upon resolution of the FAQ, the issue should be closed in accordance with the closure guidance in IMC 0608, "Performance Indicator Program."

Unintended consequences. Inspectors should document instances of unintended consequences (e.g., instances of compliance with PI reporting guidance resulting in less safe actions or PIs possibly not resulting in an appropriate regulatory response) in an ROP FBF. The issues can be documented as URIs in inspection reports if they involve PI discrepancy determinations that require resolution of the FBF.

#### 71151-04 RESOURCE ESTIMATE

This procedure is to be implemented annually. The effort to complete all annual PI verifications is estimated to be:

Units per Site	One	Two	Three
Hours per Year	19 to 23	25 to 31	31 to 38

#### 71151-05 PROCEDURE COMPLETION

Performance Indicator	Number of Samples		
	1-unit	2-unit	3-unit
IE01: Unplanned Scrams per 7,000 Critical Hours	1	2	3
IE03: Unplanned Power Changes per 7000 Critical Hours	1	2	3
IE04: Unplanned Scrams with Complications	1	2	3
MS05: SSFFs	1	2	3
MS06: MSPI – Emergency AC Power Systems	1	2	3
MS07: MSPI – High Pressure Injection Systems	1	2	3
MS08: MSPI – Heat Removal Systems	1	2	3
MS09: MSPI – Residual Heat Removal Systems	1	2	3
MS10: MSPI – Cooling Water Systems	1	2	3
BI01: RCS Specific Activity	1	2	3
BI02: RCS Leakage	1	2	3
EP01: Drill/Exercise Performance	1	1	1
EP02: ERO Drill Participation	1	1	1

Performance Indicator	Number of Samples		
	1-unit	2-unit	3-unit
EP03: ANS Reliability	1	1	1
OR01: Occupational Exposure Control Effectiveness	1	1	1
PR01: REST/ODCM Radiological Effluent Occurrence	1	1	1
PP01: Protected Area Security Equipment Performance Index: See RPS for sample size information.			

## 71151-06 REFERENCES

[Code of Federal Regulations](#)

[Public FAQ Site](#)

[NEI 99-02, Regulatory Assessment Performance Indicator Guideline](#)

[NRR/DIRS/IPAB PI SharePoint Site](#) (internal guidance for inspectors)

[NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73"](#)

[IMC 0305, "Operating Reactor Assessment Program"](#)

[IMC 0308, Attachment 1, "Technical Basis for Performance Indicators"](#)

IMC 0308, Attachment 6, "Basis Document for Security Cornerstone of the Reactor Oversight Process"

[IMC 0608, "Performance Indicator Program"](#)

[IMC 0612, Appendix B, "Issue Screening"](#)

[IP 71111.04, "Equipment Alignment"](#)

[IP 71111.12, "Maintenance Effectiveness"](#)

[IP 71111.13, "Maintenance Risk Assessments and Emergent Work Control"](#)

[IP 71111.15, "Operability Determinations and Functionality Assessments"](#)

[IP 71111.22, "Surveillance Testing"](#)

[IP 71114.01, "Exercise Evaluation"](#)

[IP 71114.02, "Alert and Notification System Testing"](#)

[IP 71114.06, "Drill Evaluation"](#)

[IP 71124.06, "Radioactive Gaseous and Liquid Effluent Treatment"](#)

[IP 71150, "Discrepant or Unreported Performance Indicator Data"](#)

[IP 71153, "Follow-up of Events and Notices of Enforcement Discretion"](#)

[NRC Enforcement Policy](#)

RIS 2000-08, Revision 1, "Voluntary Submission of Performance Indicator Data

END

Attachments 1:      Revision History

Attachment 1

Revision History for IP 71151

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	04/03/00 CN 00-003	Initial Issuance.		
N/A	ML010820202 03/06/01 CN 01-006	Revised to provide improved guidance on how to conduct PI verification inspections and how to document the inspection findings.		
N/A	ML021190711 04/16/02 CN 02-017	Added clarification for PI verification inspections at multi-unit sites and guidance for SSU when the time of the failure is unknown. CN 02-017		
N/A	ML040210349 12/16/03 CN 03-041	Clarified that each performance indicator for all units will be verified once a year. CN 03-041		
N/A	ML042680395 10/06/04 CN 04-025	Deleted security-related information from the procedure; procedure completion section to document the minimum sample size. CN 04-025.		
N/A	ML062790146 01/04/07 CN 07-001	Researched commitments back four years - none found as of 12/20/06.  Added guidance for verification of MSPI and removed references to safety system unavailability indicators. CN 07-001	Training was provided 04/2006 for MSPI.	ML063510006

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	ML070720376 06/28/07 CN 07-021	Added guidance for verification of USwC and removed references to Scrams with Loss of Heat Removal and other minor edits.	Regions informed on 6/14/07 that Web-based USwC training was available.	ML071550335
N/A	ML11346A609 12/23/11 CN 11-043	Modified effort estimate based on ROP realignment results. Reformatted to new IMC 0040 guidance for IPs. Incorporates the resolution to FBFs 71151-1573 and -1665. Modified and added MSPI and SSFF PI guidance. Modified and added inspection results and documentation guidance.	N/A	ML11346A303
N/A	ML12219A278 09/26/12 CN 12-022	Relocated guidance from IMC 0612 proper on documenting the scope of PI verification inspections. Clarified that an ROP FBF is not required to initiate the FAQ process.	N/A	N/A
N/A	ML16223A327 12/08/16 CN 16-032	Reduced annual resource estimate by half per Commission direction in SRM SECY 16-009. This reduction better reflects actual expenditures for this procedure. Clarifications for requirements made per OIG audit 16-A-12 and for Inspection Report Initiative.	N/A	ML16223A471