

## APPENDIX A

### REACTOR OVERSIGHT PROCESS SELF-ASSESSMENT METRICS

#### I. PERFORMANCE INDICATOR PROGRAM METRICS

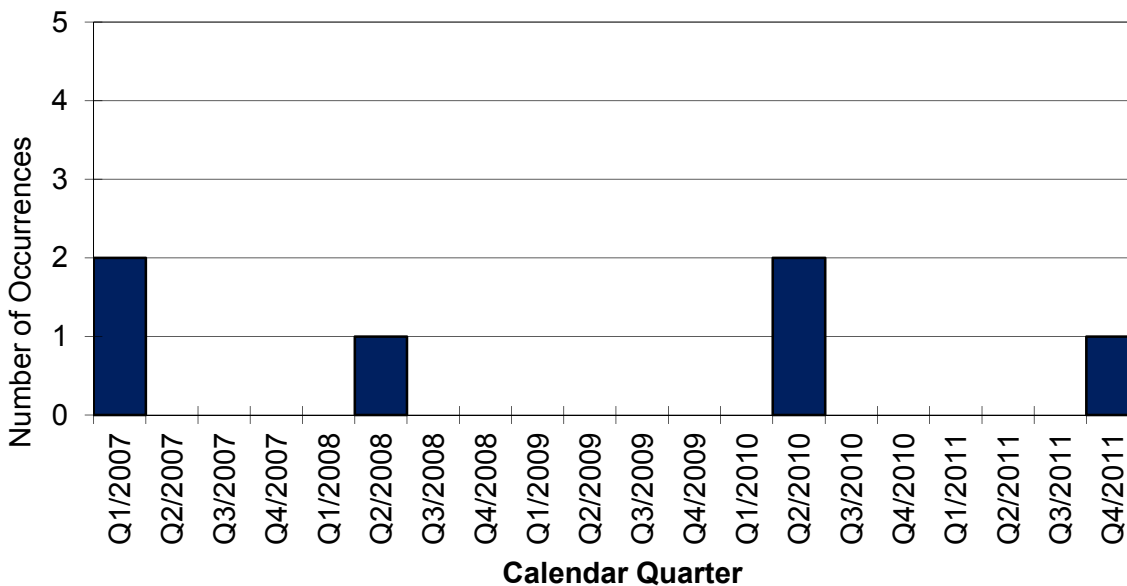
##### PI-1 Consistent Results Given Same Guidance

**Definition:** Independently verify performance indicators (PIs) using Inspection Procedure (IP) 71151, "PI Verification." Count all PIs that either (a) result in a crossed threshold based on a data correction by the licensee (as noted in the resultant inspection report), or (b) have been determined to be discrepant by the staff in accordance with IP 71150, "Discrepant or Unreported Performance Indicator Data."

**Criteria:** Expect few occurrences, with a stable or declining trend.

**Goals Supported:** Objective, Predictable

The following chart presents the number of PIs that crossed or would have crossed a threshold that was associated with the identification of a PI discrepancy if the data had been reported correctly.



**Analysis:** A PI discrepancy is a difference between what was expected to be reported in accordance with PI reporting guidelines and what was reported by the licensee in its PI data submissions. One PI crossed a threshold in Calendar Year (CY) 2011 after inspectors identified of a PI discrepancy. The Perry Nuclear Power Plant failed to report accurate PI data for the Occupational Exposure Control Effectiveness PI (Inspection Report 05000440/2011004, dated November 1, 2011). The data contributed to the PI crossing into the white performance band. Because the chart data show a stable trend since CY 2007,

and there was only one PI discrepancy associated with an exceeded threshold in CY 2011, this metric is met.

**Metric Criteria Met:** Yes

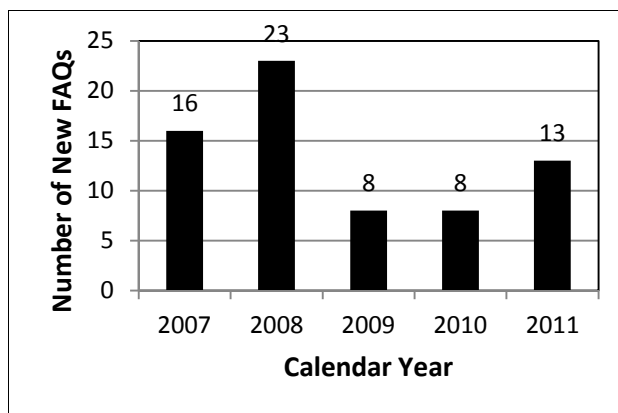
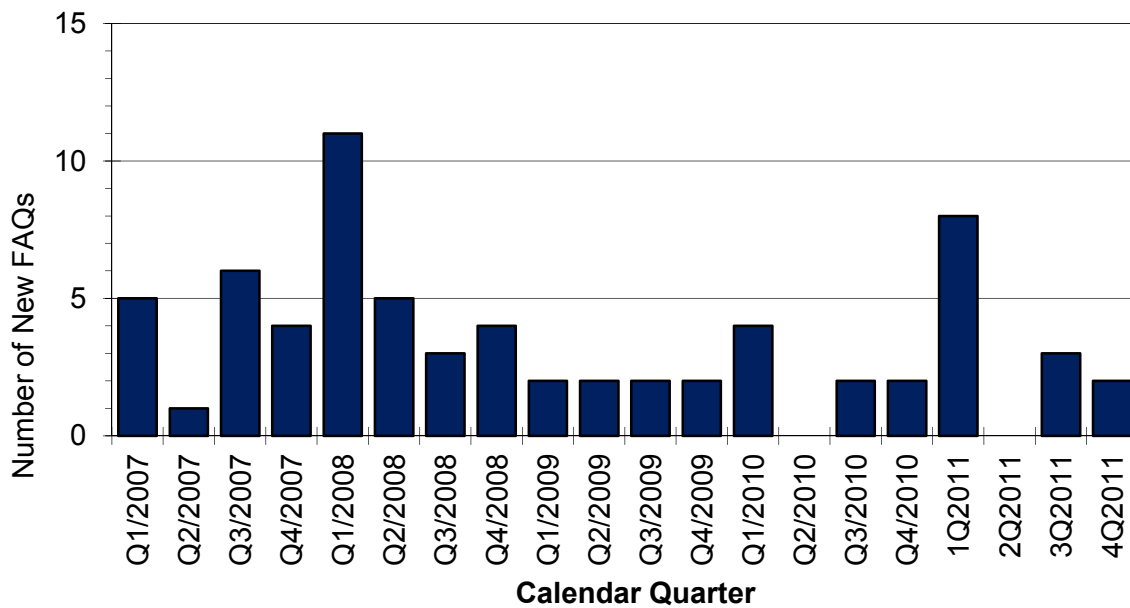
**PI-2 Questions Regarding Interpretation of PI Guidance**

**Definition:** Quarterly, count the number of frequently asked questions (FAQs).

**Criteria:** Expect low numbers, with a stable or declining trend.

**Goals Supported:** Understandable, Risk-Informed, Predictable

The chart below presents the total number of new FAQs introduced during the Reactor Oversight Process (ROP) Working Group meetings held during the respective quarter. Also included is a plot of the average number of FAQs per year.



**Analysis:** Although more new FAQs were introduced in CY 2011 than in the previous year, this number is still fewer than in 2007 and 2008, and is generally consistent with prior years. Several FAQs in the first quarter of 2011 were related to the resolution of an NRC staff white paper to clarify guidance on the Mitigating

System Performance Index (MSPI). Because of the stable trend, this metric is met.

The staff planned to initiate a feedback form in the CY 2010 metric report to clarify the intent of this metric. The staff has initiated a feedback form, 0307A-1760, to evaluate all the metrics and revise them as necessary to ensure they offer valid measures of ROP effectiveness.

**Metric Criteria Met:** Yes

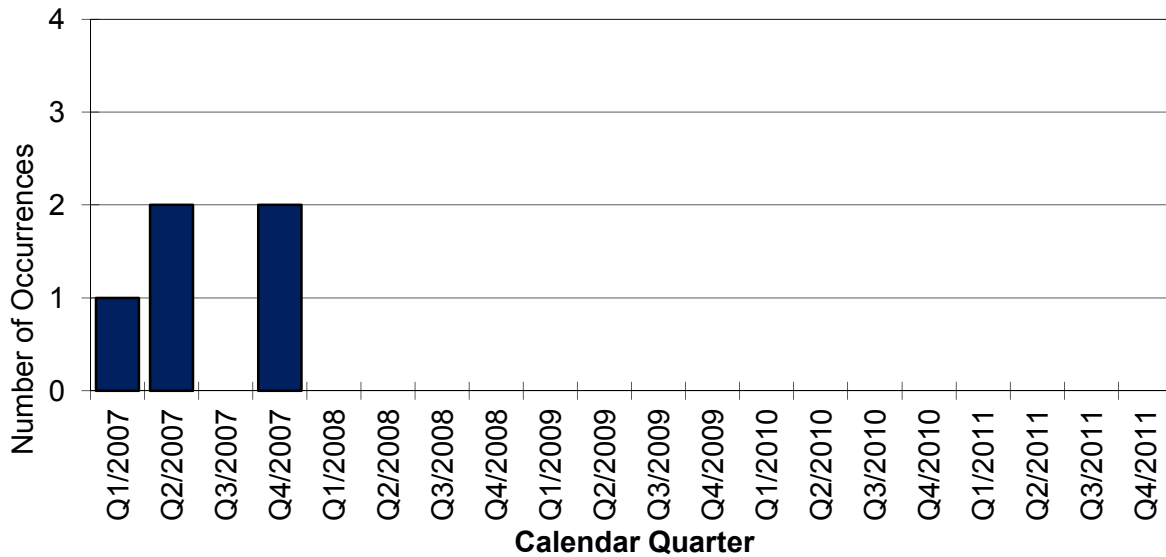
**PI-3 Timely Indication of Declining Plant Performance**

**Definition:** Quarterly, track PIs that cross multiple thresholds (e.g., green to yellow or white to red). Evaluate and characterize these results to allow timely indication of declining performance.

**Criteria:** Expect few occurrences, with a stable or declining trend.

**Goals Supported:** Risk-Informed, Effective

The chart represents the number of PIs that crossed multiple thresholds reported for each quarter.



**Analysis:** During this assessment period (CY 2011), there were no occurrences of a PI that crossed multiple thresholds. In addition, the chart shows a stable trend.

**Metric Criteria Met:** Yes

**PI-4            PI Program Provides Insights To Help Ensure Plant Safety and/or Security**

**Definition:**    Survey external and internal stakeholders asking whether the PI program provides useful insights, particularly when combined with the inspection program, to help ensure plant safety and/or security.

**Criteria:**        Expect stable or increasingly positive perceptions over time.

**Goals Supported:**    Effective, Risk-Informed, Open

**Analysis:**        The ROP survey respondents generally indicated that the PI program, in conjunction with the inspection program, provides useful insights to ensure plant safety and security. The nuclear power industry and State and local officials gave positive responses and commented on the potential impact of reporting requirement changes on the Safety System Functional Failures (SSFF) PI. However, some members of the public expressed concerns about licensees' implementation practices, exceptions allowed by the FAQ process, the MSPI, and the PI performance band thresholds. The staff will address this feedback in the consolidated response to the ROP external survey comments.

The staff considers the metric to be met because the majority of survey respondents indicated that the PI program, in conjunction with the inspection program, provides useful insights on ensuring plant safety and security.

**Metric Criteria Met:** Yes

**PI-5 Timely PI Data Reporting and Dissemination**

**Definition:** Within 5 weeks of the end of each calendar quarter, track (count) late PI postings on the NRC's external Web site. Also note the number of late submittals from licensees that did not meet the 21-day timeliness goal.

**Criteria:** Expect few occurrences, with a stable or declining trend.

**Goals Supported:** Effective, Open, Predictable

**Analysis:** In the first quarter of CY 2011, the PI data for three units (Indian Point 2, St. Lucie 1, and Dresden 2) did not initially upload to the external Web site correctly. This resulted in the three units' data missing the due date for PI postings. The data were corrected within 1 week of the due date. The remaining Web site postings in CY 2011 were completed on time. Because the data of 104 units are posted to the external Web sites quarterly, this equates to 416 PI data postings per year. The three units that missed the due date in the first quarter of CY 2011 represent less than 1 percent of the total PI data postings in CY 2011.

Four units were late in submitting PI data in CY 2011 (two in the second quarter, one in the third quarter, and one in the fourth quarter); however, these submissions were not related to the PI Web site posting problems mentioned above. The data submission of one site (two units) was 2 business days late because the site had problems with its server. Although this caused the NRC to delay posting this site's data on the internal Web site, the late data did not affect the NRC's ability to post the data externally on time. Two submissions were only 1 day late and had no impact on the NRC's ability to post the PI data on the NRC's external Web site in a timely manner.

This staff considers this metric to be met because there were few occurrences of late PI data Web site postings and the trend is stable.

**Metric Criteria Met:** Yes

**PI-6 Stakeholders Perceive Appropriate Overlap Between the PI Program and the Inspection Program**

**Definition:** Survey external and internal stakeholders asking if appropriate overlap exists between the PI program and the inspection program.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Effective, Open

**Analysis:** The ROP survey respondents generally agreed that the overlap between the PI and inspection programs is appropriate. The nuclear power industry and State and local officials gave positive responses and stated some concerns about the overlap between PIs and the component design-basis inspections. Some members of the public expressed concerns about the enforcement response to PI reporting errors and the exceptions the FAQ process allows. The staff will address this feedback in the consolidated response to the ROP external survey comments.

The staff considers the metric to be met because the majority of survey respondents indicated that the overlap between the PI and inspection programs is appropriate.

**Metric Criteria Met:** Yes



**PI-7            Clarity of Performance Indicator Guidance**

**Definition:**    Survey external and internal stakeholders asking if Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," provides clear guidance regarding PIs.

**Criteria:**        Expect stable or increasingly positive perception over time.

**Goals Supported:**    Understandable, Open, Objective

**Analysis:**        The ROP survey respondents generally indicated that NEI 99-02 gives clear guidance on reporting PI data to the NRC. Most of the responses from the nuclear power industry and State and local officials were positive overall; however, they did express concerns about knowledge transfer, the complexity of the MSPI, and the timeliness of FAQ posting. A respondent expressed a concern about the exceptions allowed by the FAQ process. The staff will address this comment in the consolidated response to the ROP external survey comments.

The staff considers the metric to be met because the majority of survey respondents indicated that NEI 99-02 gives clear guidance on reporting PI data to the NRC.

**Metric Criteria Met:** Yes

**PI-8            PI Program Contributes to the Identification of Performance Outliers in an Objective and Predictable Manner**

**Definition:**    Survey external and internal stakeholders asking if the PI program effectively contributes to the identification of performance outliers based on risk-informed, objective, and predictable indicators.

**Criteria:**        Expect stable or increasingly positive perception over time.

**Goals Supported:**   Risk-Informed, Objective, Predictable, Open

**Analysis:**        The ROP survey respondents generally indicated that the PI program effectively contributes to the identification of performance outliers based on risk-informed, objective, and predictable measures. Most responses from the nuclear power industry and State and local officials were positive overall; however, they commented that PIs are not predictive, expressed concerns about interpretations of SSFF reporting requirements, and described perceptions that green PIs are not meaningful. Some members of the public stated that PI performance-band thresholds are too high and expressed concerns about reliance on risk-based insights and the lack of safety culture PIs. The staff will address this feedback in the consolidated response to the ROP external survey comments.

The staff considers the metric to be met because the majority of survey respondents indicated that the PI program effectively contributes to the identification of performance outliers based on risk-informed, objective, and predictable measures.

**Metric Criteria Met:** Yes

## II. INSPECTION PROGRAM METRICS

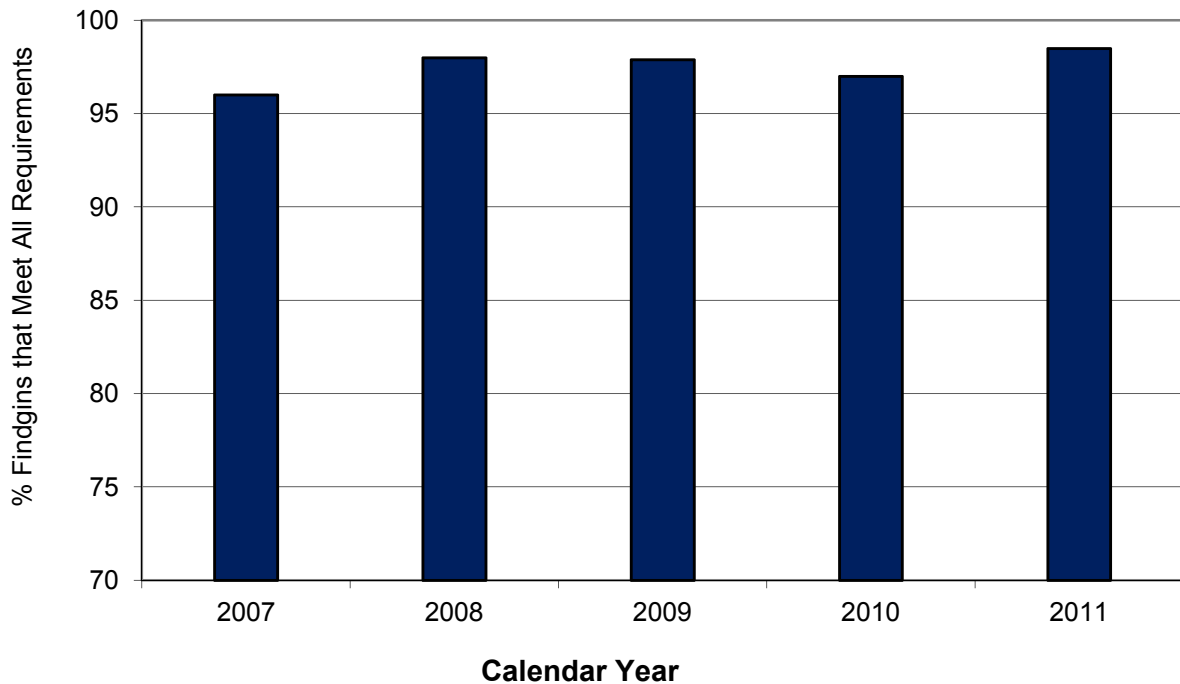
### IP-1 Inspection Findings Documented in Accordance with Requirements

**Definition:** Audit inspection reports in relation to program requirements (Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports") for documenting green findings, greater-than-green findings, and violations. Report the percentage of findings that meet the program requirements.

**Criteria:** Expect a stable or improving trend in the percentage of findings documented in accordance with program requirements.

**Goals Supported:** Objective, Risk-Informed, Predictable

The chart below presents the percentage of audited inspection findings that were documented in accordance with IMC 0612 requirements.



**Analysis:** In CY 2011, the staff audited 17 nonsecurity inspection reports issued by the regional offices. The staff found that 98.5 percent of sampled findings were documented in accordance with IMC 0612 requirements. The data confirm that a stable trend has been maintained since CY 2007.

**Metric Criteria Met:** Yes

**IP-2            Completion of Baseline Inspection Program**

**Definition:**    Annual completion of baseline inspection program.

**Criteria:**      Defined as per IMC 2515, "Light-Water Reactor Inspection Program—Operations Phase."

**Goals Supported:**    Predictable, Effective

**Analysis:**      The inspection program independently verified that licensees operated plants safely and securely in CY 2011 and identified and corrected performance issues in a timely manner, in accordance with IMC 2515 and IMC 2201, "Security and Safeguards Inspection Program for Commercial Nuclear Power Reactors." Each region documented its completion of the baseline inspection program in a memorandum available in ADAMS at Accession Nos. ML12039A276 for Region I, Accession No ML120470605 for Region II, Accession No. ML12047A364 for Region III, and Accession No. ML12053A346 for Region IV. Additionally, the Office of Nuclear Security and Incident Response completed all security baseline inspections in CY 2010, as documented in a nonpublicly available memorandum (ADAMS Accession No. ML12037A094). All regions completed their baseline inspections in CY 2011 within the allocated resources.

**Metric Criteria Met:**    Yes

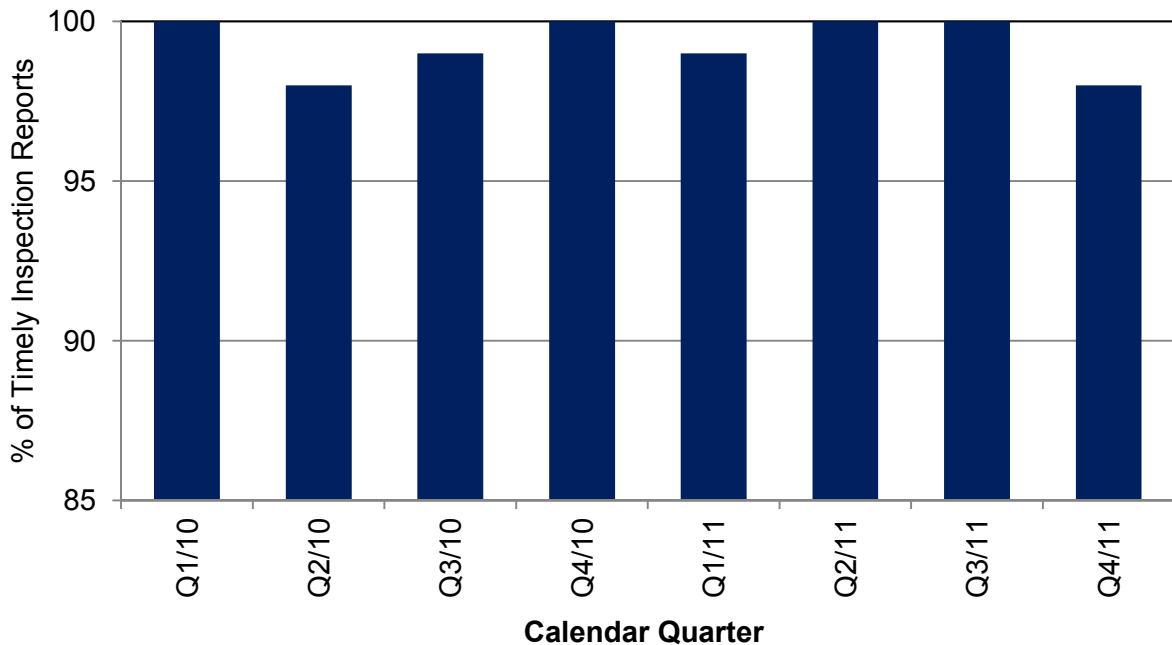
**IP-3 Inspection Reports Are Timely**

**Definition:** Obtain Reactor Program System (RPS) data on the total number of reports issued and the number issued within timeliness goals as stipulated in IMC 0612.

**Criteria:** Expect 90 percent of inspection reports to be issued within program's timeliness goals.

**Goals Supported:** Effective, Open, Predictable

The chart below presents the percentage of inspection reports that were issued on time.



**Analysis:** During CY 2011, the NRC issued 789 inspection reports. The regions met or exceeded the inspection report timeliness goal of 90 percent in each quarter of CY 2011. In CY 2011, 784 out of 789 inspection reports (99.4 percent) met the timeliness requirements in IMC 0612.

**Metric Criterion Met:** Yes

**IP-4 Temporary Instructions Are Completed Timely**

**Definition:** Audit the time to complete temporary instructions (TIs) by Region or Office. Compare the completion status in RPS to TI requirements. Report by Region or Office the number of TIs closed within goals.

**Criteria:** Expect all TIs to be completed within TI requirements.

**Goals Supported:** Effective, Predictable

**Analysis:** In CY 2011, the staff completed:

- TI 2515/172, "Reactor Coolant System Dissimilar Metal Butt Welds;"
- TI 2515/178, "Risk Management Technical Specifications Initiative 5b Surveillance Frequency Control Program;"
- TI 2515/179, "Verification of Licensee Responses to NRC Requirement for Inventories of Materials Tracked in the National Source Tracking System;"
- TI 2515/180, "Fatigue Inspection;"
- TI 2515/181, "Validate the Effectiveness of the Regulatory Infrastructure Related to Fire-Induced Circuit Failures and Operator Manual Actions;"
- TI 2515/183, "Followup to the Fukushima Daiichi Nuclear Station Fuel Damage Event;" and
- TI 2515/184, "Availability and Readiness Inspection of Severe Accident Management Guidelines (SAMGs)."

The staff completed these TIs at all plants within the established deadlines. Therefore, this metric is met.

**Metric Criteria Met:** Yes

**IP-5            Inspection Reports Are Relevant, Useful, and Written in Plain Language**

**Definition:**    Survey external and internal stakeholders asking whether the information contained in inspection reports is relevant, useful, and written in plain English.

**Criterion:**     Expect stable or increasingly positive perception over time.

**Goals Supported:** Effective, Understandable, Open

**Analysis:**     The survey respondents generally agreed that inspection reports are relevant, useful, and written in plain language. One respondent commented on the threshold for documenting inspection findings. Another commented on the importance of ensuring effective communication between the licensee and the staff about refining or revising inspection findings between the inspection exit and the issuance of the inspection report. The staff will address these comments in the consolidated response to the ROP external survey comments.

**Metric Criterion Met:** Yes

**IP-6            Inspection Program Effectiveness and Adequacy in Covering Areas Important to Plant Safety and/or Security**

**Definition:**    Survey external and internal stakeholders asking whether the inspection program adequately covers areas that are important to plant safety and/or security and is effective in identifying and ensuring the prompt correction of performance deficiencies.

**Criteria:**        Expect stable or increasingly positive perception over time.

**Goals Supported:**    Effective, Risk-Informed, Open

**Analysis:**        The respondents generally agreed that the inspection program effectively ensures that areas important to safety are appropriately addressed. Some respondents commented on the need to create more flexibility in the baseline inspection program to allow additional inspection samples in areas where licensee's programs were observed to have weaknesses. In addition, one respondent commented that inspectors should review more maintenance activities. Other comments included the need to revise the way the current ROP treats nonsafety modifications that could affect safety systems and the way safety culture assessments are conducted and documented in the ROP. The staff will address these comments in the consolidated response to the ROP external survey comments.

The staff noted a stable trend compared to the previous ROP external survey. Therefore, this metric is met.

**Metric Criteria Met:** Yes



## **IP-7 Analysis of Baseline Inspection Procedures**

**Definition:** Annually, review each baseline inspection procedure to determine its effectiveness and contribution to the overall effectiveness of the baseline inspection program. The objectives of the review are: (1) to determine if changes in scope, frequency, or level of effort are needed based on recent experience, (2) to determine if a change to the estimated hours for completion is needed, (3) to define or change what constitutes minimum completion of each inspectable area, if needed, and (4) to critically evaluate all of the inspectable areas together along with the PI program to ensure that the inspectable areas are adequately monitored for safety performance. In addition, a more detailed review and realignment of inspection resources will be performed at least biennially in accordance with Appendix B, "ROP Realignment Process," to IMC 0307. The focus of this effort is to adjust existing inspection resources to improve the effectiveness of the inspection program in identifying significant licensee performance deficiencies.

**Criteria:** None; trend only. Summarize and evaluate the individual inspection procedure reviews and propose program adjustments as necessary to address noted inefficiencies. Provide the basis for any meaningful increase or decrease in procedure scope, frequency, or level of effort as a result of the review.

**Goals Supported:** Effective, Risk-Informed

**Analysis:** As part of its periodic review to ensure the most effective application of inspection resources, the Reactor Inspection Branch (IRIB) established an inspection program realignment working group. The working group gauged the effectiveness of each ROP baseline inspection procedure and examined the inspection resources used for each procedure to determine whether appropriate inspection resources were being applied in each of the inspectable areas. The working group consisted of staff from IRIB, the Office of Nuclear Safety and Incident Response (NSIR), and each of the four regions. Areas of focus for the CY 2011 ROP realignment included lessons learned from the H.B. Robinson Augmented Inspection Team and findings identified during force-on-force (FOF) exercises that may be identifiable during security baseline inspections.

The working group shared its recommendations for the baseline inspections (frequency, sample size, etc.) with senior management from the Office of Nuclear Reactor Regulation's Division of Inspection and Regional Support, the NSIR's Division of Preparedness and Response and Division of Security Operations, and the four regional Divisions of Reactor Projects and Divisions of Reactor Safety. These managers reached consensus to endorse the working group's recommendations. The staff made modifications and adjustments to the inspection effort across the baseline inspection program, but overall inspection resources for CY 2012 remain at CY 2011 levels. The staff revised nine baseline inspection procedures, which became effective beginning in CY 2012. Additional details on the results of the CY 2011 ROP realignment process can be found at ADAMS Accession No. ML11178A329.

**Metric Criteria Met:** Yes because trend analysis was performed

### III. SIGNIFICANCE DETERMINATION PROCESS METRICS

#### SDP-1 The Significance Determination Process (SDP) Results Are Predictable and Repeatable and Focus Stakeholder Attention on Significant Safety Issues

**Definition:** Annually, audit a representative sample (up to four per region) of inspection findings against the standard criteria set forth in IMC 0609, "Significance Determination Process," and its appendices. To the extent available, samples should include potentially greater-than-green findings that were presented to the Significance Determination Process/Enforcement Review Panel (SERP). Findings should contain sufficient detail to enable an independent auditor to trace through the available documentation and reach the same significance color characterization.

**Criteria:** The target goal is that at least 90 percent of SDP results are determined to be predictable and repeatable. Any SDP outcomes determined to be nonconservative will be evaluated, and appropriate programmatic changes will be implemented.

**Goals Supported:** Risk-Informed, Predictable

**Analysis:** Thirteen findings had greater-than-green significance in CY 2011. The staff audited two findings from each region to create a representative sample of eight findings that had greater-than-green significance. The final significance of each finding was evaluated using the risk-informed process detailed in IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The documentation of each finding's final significance characterization included adequate detail to support the determination; therefore, the final significance of each finding was predictable and repeatable. The staff determined that 100 percent of samples chosen for review have been predictable and repeatable since CY 2005.

**Metric Criteria Met:** Yes

**SDP-2            SDP Outcomes Are Risk-Informed and Accepted by Stakeholders**

**Definition:**    Track the total number of appeals of final SDP results.

**Criteria:**        Expect zero appeals of SDP significance findings that result in a final determination being overturned across all regions. All successful appeals will be assessed to determine causal factors and to recommend process improvements.

**Goals Supported:**    Risk-Informed, Objective, Predictable

**Analysis:**        One appeal of a finding of red significance occurred in CY 2011; however, Region II upheld the outcome of the original finding's risk characterization. This metric is met, because no appeals of significance determinations were successful.

**Metric Criteria Met:** Yes

**SDP-3      Inspection Staff Is Proficient and Finds Value in Using the SDP**

**Definition:**      Survey internal stakeholders by using specific quantitative survey questions that focus on training, effectiveness, and efficiency.

**Criteria:**      Expect stable or increasingly positive perception over time.

**Goals Supported:**      Effective, Understandable, Risk-Informed

**Analysis:**      Because IMC 0307 states that internal surveys should be conducted biennially, no internal survey took place in CY 2011. The next survey to internal stakeholders will be conducted during the fourth quarter of CY 2012. However, this metric was met in CY 2010 based on the results of the CY 2010 internal ROP survey, which are documented in the CY 2010 ROP metric report (ADAMS Accession No. ML100540037).

**Metric Criteria Met:** Yes

**SDP-4      The SDP Results in an Appropriate Regulatory Response to Performance Issues**

**Definition:**      Survey external and internal stakeholders asking if the SDP results in an appropriate regulatory response to performance issues.

**Criteria:**      Expect stable or increasingly positive perception over time.

**Goals Supported:**      Understandable, Objective, Predictable, Open

**Analysis:**      The survey respondents generally agreed that the SDP results in an appropriate regulatory response to performance issues. Several stakeholders provided recommendations to improve the SDP. One respondent proposed some improvements to the SDP guidance and another respondent pointed out a possible increasing trend toward more greater-than-green findings in one safety cornerstone than in the others.

Some respondents felt that the SDP did not result in an appropriate regulatory response to performance issues. The staff will address these comments in the consolidated response to the ROP external survey comments.

**Metric Criteria Met:** Yes

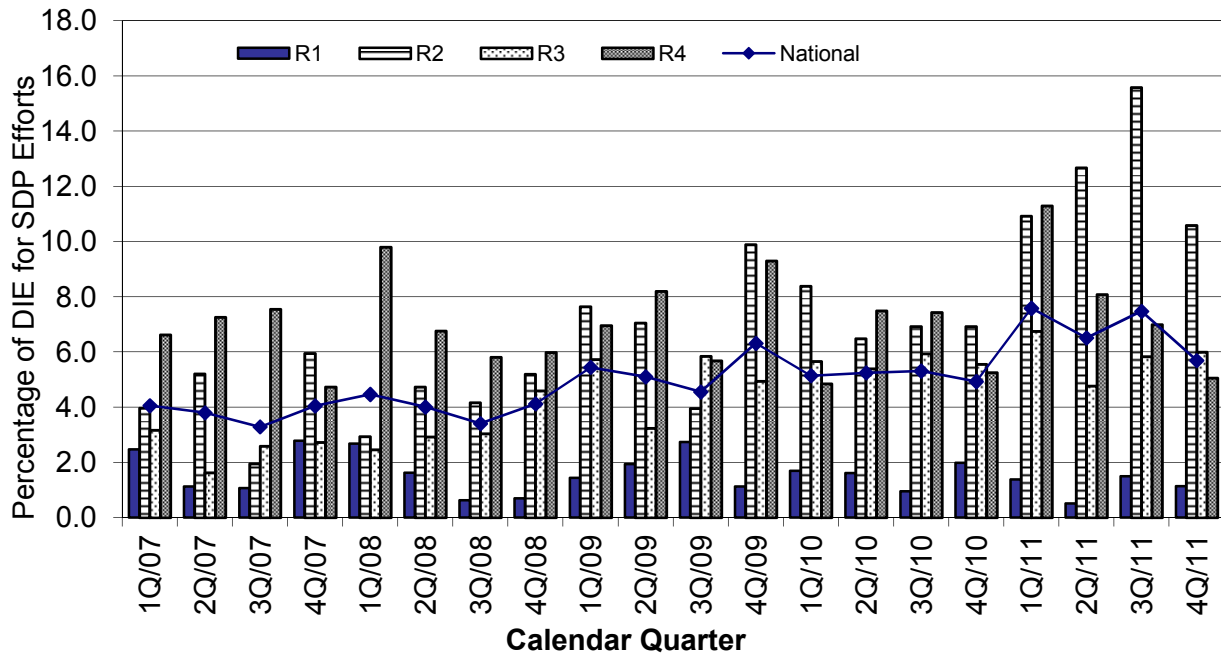
**SDP-5 Resources (Direct Charges and Support Activities) Expended Are Appropriate**

**Definition:** Track the percentage of total resource expenditures attributed to SDP activities to determine the effort expended by the regions in completing SDP evaluations as a percentage of the total regional direct inspection effort (DIE).

**Criteria:** Total SDP expenditures should not exceed 10 percent of the total regional DIE and should show a stable or declining trend.

**Goals Supported:** Effective, Predictable

The chart below presents the percentage of SDP resource expenditures to total DIE per region.



**Analysis:** Regional expenditures associated with SDP evaluations remain below the threshold of 10 percent of the total DIE; however, the national average has slightly increased over the past 5 years. In CY 2007 and CY 2008, the national averages were about 4 percent, while the averages from CY 2009 and CY 2010 were approximately 5 percent. In CY 2011, the national average increased to about 7 percent, which is relatively stable and well below the goal of 10 percent. The regional contributions to the national average are reflected in the chart above.

**Metric Criteria Met:** Yes

**SDP-6 Final Significance Determinations Are Timely**

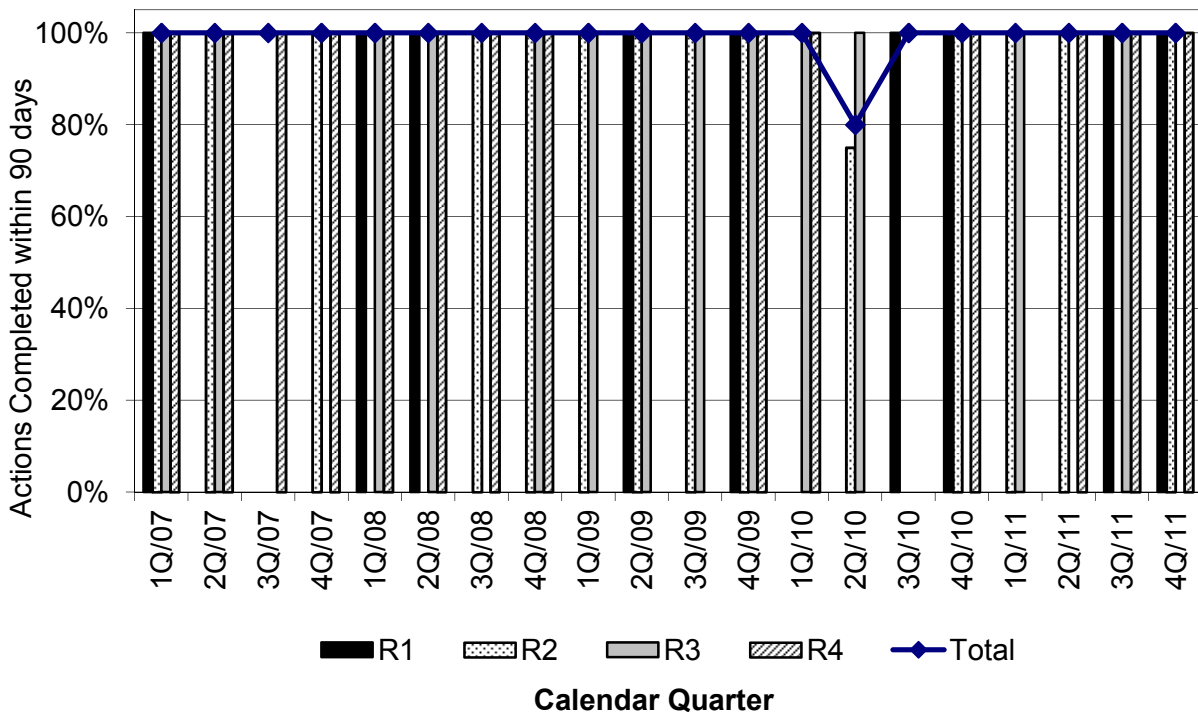
**Definition:** Conduct a quarterly audit of RPS data to identify the total number of inspection items finalized as greater-than-green that were under review for more than 90 days since:

- (1) the date of initial licensee notification of the preliminary significance in an inspection report, or
- (2) the item was otherwise documented in an inspection report as an apparent violation pending completion of a significance determination and not counted in the above category.

**Criteria:** At least 90 percent of all SDP results that are counted per the criteria above should be finalized within 90 days. All issues older than 90 days will be assessed to determine causal factors and to recommend process improvements.

**Goals Supported:** Effective, Open, Predictable

The chart below presents the percentage of SDP results that were completed within 90 days.



**Analysis:** Final significance determinations have been consistently completed on time for the past 5 years, except for one finding in CY 2010. This metric is met because 100 percent of the 13 greater-than-green findings in CY 2011 met the 90-day goal.

**Metric Criteria Met:** Yes

**IV. ASSESSMENT PROGRAM METRICS**

**AS-1 Actions Are Determined by Quantifiable Assessment Inputs (i.e., PIs and SDP Results) and Are Commensurate with the Risk of the Issue and Overall Plant Risk**

**Definition:** Audit all assessment-related letters and count the number of Action Matrix deviations. Evaluate the causes of these deviations and identify changes to the ROP, if any, to improve the guidance documents.

**Criteria:** Expect few deviations, with a stable or declining (i.e., improving) trend.

**Goals Supported:** Objective, Risk-Informed, Open

The table below shows the number of new and renewed deviations in effect each year since 2007.

CY	2007	2008	2009	2010	2011
New	1	0	0	3	0
Renew	2	1*	0	0	0

*\* This deviation was renewed in December 2008 and was in effect in CY 2009.*

**Analysis:** Nineteen Action Matrix deviations have occurred since the beginning of the ROP in CY 2000. No new deviations were opened in CY 2011.

On April 5, 2010, the Executive Director for Operations approved an Action Matrix deviation to increase oversight of the Vermont Yankee Nuclear Power Station because of onsite groundwater contamination. In CY 2011, the NRC determined that further inspection was required to determine if the licensee’s procedures and groundwater movement model were sufficient to monitor the remediation of the existing groundwater contamination plume. However, this further inspection was conducted within the planned baseline inspection activities. On September 20, 2011, the NRC issued “Vermont Yankee Nuclear Power Station—Groundwater Monitoring Inspection Report 05000271/2011010” (ADAMS Accession No. ML112630475) to close the deviation because it determined that the exit criteria for the original deviation memorandum had been satisfied.

The staff considers this metric met for CY 2011 because no new deviations were issued in CY 2011

**Metric Criteria Met:** Yes



**AS-2      Number and Scope of Additional Actions Recommended as a Result of the Agency Action Review Meeting Beyond Those Actions Already Taken Are Limited**

**Definition:**      Review the results of the Agency Action Review Meeting (AARM).

**Criteria:**      Expect few additional actions, with a stable or declining (i.e., improving) trend.

**Goals Supported:**      Understandable, Predictable, Objective

**Analysis:**      The AARM was held on April 20, 2011, in Bethesda, MD. No reactor facilities met the criteria for being discussed. After reviewing the ROP self-assessment results, the completed or planned courses of action, and continued improvement to the safety and security PIs, the NRC senior managers determined that the ROP is meeting the agency's strategic goals. The NRC senior managers also reviewed the Industry Trends Program results for Fiscal Year (FY) 2010 and did not identify any statistically significant adverse trends in industry safety performance through the end of FY 2010. Based on the AARM discussions, the NRC senior managers determined that no actions for reactor facilities were necessary beyond those already planned.

The next AARM is scheduled for April 25, 2012.

**Metric Criteria Met:** Yes

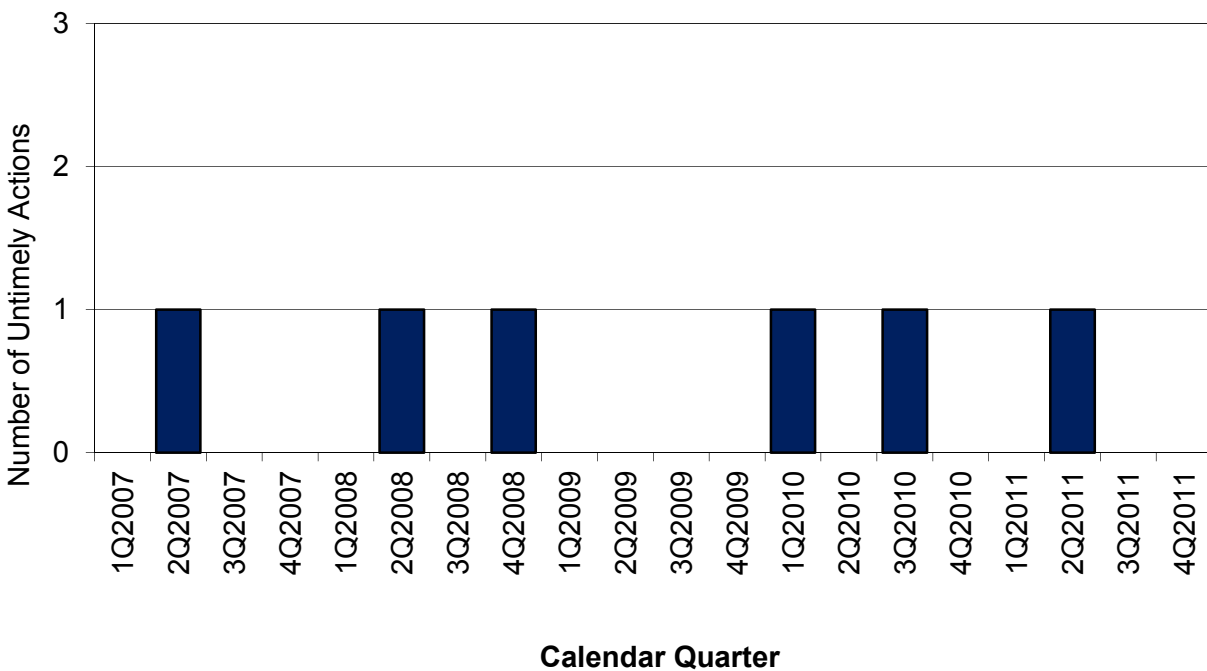
**AS-3 Assessment Program Results (Assessment Reviews, Assessment Letters, and Public Meetings) Are Completed in a Timely Manner**

**Definition:** Track the number of instances in which the timeliness goals stipulated in IMC 0305, "Operating Reactor Assessment Program," were not met for (1) the conduct of quarterly, midcycle, and end-of-cycle reviews, (2) the issuance of assessment letters, and (3) the conduct of public meetings.

**Criteria:** Expect few instances in which timeliness goals were not met, with a stable or declining trend.

**Goals Supported:** Effective, Open, Predictable

The chart below presents the number of untimely actions per calendar quarter.



**Analysis:** Timeliness goals for assessment-related activities include the following: (1) quarterly reviews are completed within 5 weeks of the end of the first and third quarters, (2) mid-cycle reviews are completed within 7 weeks of the end of the second quarter, (3) end-of-cycle reviews are completed within 7 weeks of the end of the fourth quarter, (4) assessment letters are issued within 2 weeks of the quarterly review and within 9 weeks of the mid-cycle and end-of-cycle reviews, and (5) public meetings are completed within 16 weeks of the end of the assessment period.

Of all the aforementioned activities, all but one of the annual public meetings met the timeliness goals. Because only one timeliness goal was not met and the trend is stable over the years, this metric is met.

**Metric Criteria Met:** Yes

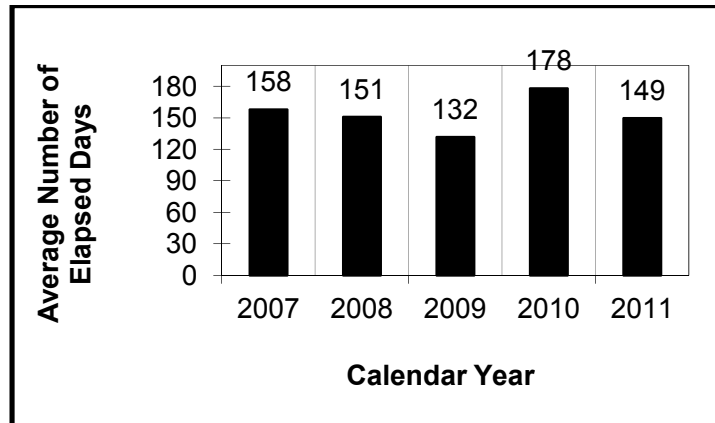
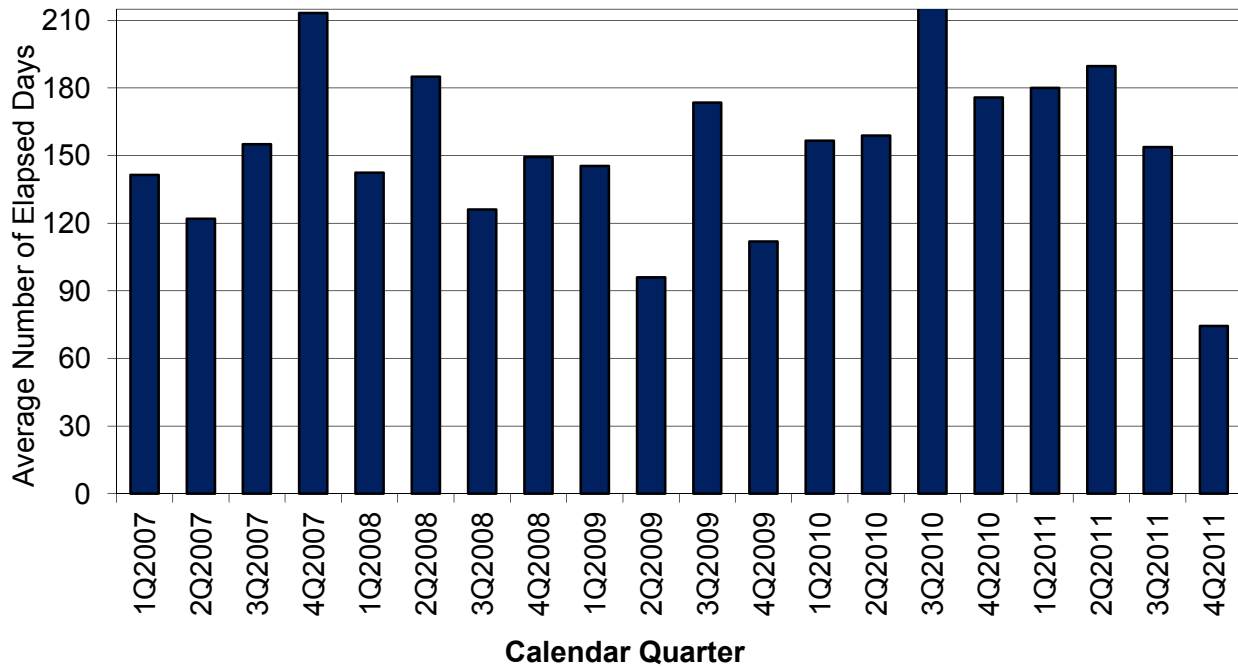
**AS-4 The NRC's Response to Performance Issues Is Timely**

**Definition:** Count the number of days between issuance of an assessment letter discussing an issue having more than very low safety significance and completion of the supplemental inspection (by exit meeting date, not issuance of the inspection report).

**Criteria:** Expect a stable or declining trend.

**Goals Supported:** Effective, Predictable

The chart below presents the average number of days between the issuance of the assessment letter and the completion date of the supplemental inspection for safety-significant findings per calendar quarter. Also included is a plot of the average number of days per year.



**Analysis:** The data collected show that the elapsed time between the issuance of an assessment letter and the completion of the corresponding supplemental inspection has decreased from CY 2010. In addition, the yearly average for CY 2011 was consistent with previous years' averages. Because of the decrease from CY 2010 and relative stability of the trend, the staff considers this metric met for CY 2011.

Because the metric was not met in CY 2010, the staff had planned to initiate a feedback form for supplemental inspection IPs to emphasize the importance of timeliness. A feedback form was not developed because all supplemental inspection IPs already contain the language to ensure timeliness. The staff is considering emphasizing timeliness in other ROP guidance documents and has initiated a feedback form, 0305-1761, for this effort.

**Metric Criteria Met:** Yes

**AS-5      The NRC Takes Appropriate Actions To Address Performance Issues**

**Definition:**      Survey external and internal stakeholders asking whether the NRC takes appropriate actions to address performance issues for those plants outside the Licensee Response Column of the Action Matrix.

**Criteria:**      Expect stable or increasingly positive perception over time.

**Goals Supported:**      Effective, Understandable, Open

**Analysis:**      The survey respondents generally agreed that the actions taken by the NRC to address performance issues at plants outside the Licensee Response column of the Action Matrix were appropriate during CY 2011. Two respondents expressed concerns with the NRC's actions; however, both of them noted that most of the actions are appropriate to address performance issues. The staff will address these comments in the consolidated response to the ROP external survey comments. Because of the positive response from survey respondents and a stable positive perception over time, this metric is met.

**Metric Criteria Met:** Yes

**AS-6 Assessment Reports Are Relevant, Useful, and Written in Plain Language**

**Definition:** Survey external and internal stakeholders asking whether the information contained in assessment reports is relevant, useful, and written in plain English.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Understandable, Effective, Open

**Analysis:** Survey respondents generally agreed that the information contained in assessment letters is relevant, useful, and written in plain language. One respondent commented that assessment letters can sometimes be too “text book and wordy,” while another commented that the SCCI discussion can be inconsistent. The staff will address these comments in the consolidated response to the ROP external survey comments. The data supporting this metric indicate a stable and positive perception over time.

**Metric Criteria Met:** Yes

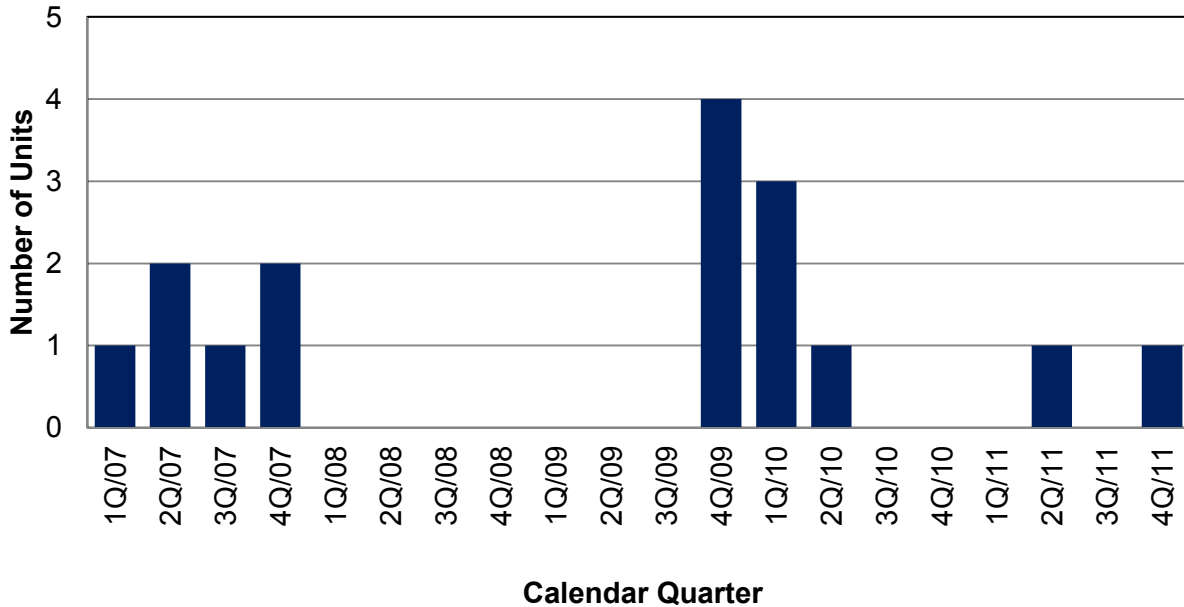
**AS-7 Degradations in Plant Performance Are Gradual and Allow Adequate Agency Engagement of the Licensees**

**Definition:** Track the number of instances each quarter in which plants move more than one column to the right in the Action Matrix (as indicated on the Action Matrix Summary).

**Criteria:** Expect few instances in which plant performance causes a plant to move more than one column to the right in the Action Matrix. Provide a qualitative explanation of each instance in which this occurs. Expect a stable or declining trend.

**Goals Supported:** Risk-Informed, Predictable

The chart below shows the number of units that moved more than one column to the right in the Action Matrix per calendar quarter.



**Analysis:** In CY 2011, two units moved from Column 1 to Column 3. This metric was not met in CY 2010 because of the high number of units crossing multiple columns. Because the trend is relatively consistent with prior years and improved from CY 2010, this metric is met.

The staff planned to initiate a feedback form for this metric in the CY 2010 Metric Report to evaluate the value of this metric as an indicator of ROP effectiveness. The staff has initiated a feedback form, 0307A-1760, to evaluate all the metrics and revise them as necessary for the CY 2012 self-assessment period.

**Metric Criteria Met:** Yes

**AS-8 Perceived Effectiveness of Safety Culture Enhancements to ROP**

**Definition:** Survey external and internal stakeholders asking whether the ROP safety culture enhancements help in identifying licensee safety culture weaknesses and focusing licensee and NRC attention appropriately.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Effective, Open

**Analysis:** The survey respondents generally agreed that the ROP safety-culture enhancements are effective at identifying weakness and appropriately focusing licensee and NRC attention, especially for plants in columns three and four of the action matrix. One comment indicated that “the cross-cutting aspects associated with inspection findings do seem to provide value to the licensee to consider in the assessment of safety culture.” There were some comments about the appropriateness of the criteria for a cross cutting aspect to be considered as a substantive cross cutting issue. The staff will address these comments in the consolidated response to the ROP external survey comments.

Several respondents also encouraged the NRC to develop a common language for both the agency and the industry to use when describing aspects of safety culture. The staff held a workshop in CY 2011 to develop this common language and will work with the industry to establish a common set of terminology for power reactors. The staff will continue to consider industry initiatives in this area and opportunities to leverage demonstrated results from those industry initiatives to gain efficiencies in the ROP.

**Metric Criteria Met:** Yes



**V. OVERALL REACTOR OVERSIGHT PROCESS METRICS**

**O-1 Stakeholders Perceive the ROP To Be Predictable and Objective**

**Definition:** Survey external and internal stakeholders asking if ROP oversight activities are predictable (i.e., controlled by the process) and reasonably objective (i.e., based on supported facts, rather than relying on subjective judgment).

**Criteria:** Expect a stable or increasingly positive perception over time.

**Goals Supported:** Objective, Predictable, Effective, Open

**Analysis:** The respondents generally agree that the ROP is predictable and reasonably objective. Some survey respondents pointed out opportunities for improvement in various program areas, such as closing unresolved items in a timely manner and evaluating estimated inspection hours for large team inspections. The staff will evaluate and address those comments in the consolidated response to external survey comments. Because of the stable trend over time, this metric is met.

**Metric Criterion Met:** Yes

**O-2 Stakeholders Perceive the ROP To Be Risk Informed**

**Definition:** Survey external and internal stakeholders asking if the ROP is risk informed, in that actions and outcomes are appropriately graduated on the basis of increased significance.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Risk-Informed, Effective, Open

**Analysis:** The survey respondents generally agreed that the ROP provides appropriate gradation of actions and outcomes on the basis of increased risk. A few respondents provided feedback on the SDP, and the staff will address these comments in the consolidated response to the ROP external survey comments. This metric is met, with a stable trend over time.

**Metric Criterion Met:** Yes

**O-3 Stakeholders Perceive the ROP To Be Understandable**

**Definition:** Survey external and internal stakeholders asking if the ROP is understandable and if the processes, procedures, and products are clear and written in plain English.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Understandable, Effective, Open

**Analysis:** The survey respondents generally agreed that ROP procedures and products are generally clear and understandable. Some survey respondents commented that the SDP procedures are difficult to follow and MSPI is complex. The staff will address all comments in the consolidated response to the ROP external survey comments. Because of the stable trend over time, this metric is met.

**Metric Criterion Met:** Yes

**O-4 Stakeholders Perceive That the ROP Provides Adequate Regulatory Assurance That Plants Are Operated and Maintained Safely and Securely**

**Definition:** Survey external and internal stakeholders asking if the ROP provides adequate regulatory assurance, when combined with other NRC regulatory processes, that plants are being operated and maintained safely and securely.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Effective, Open

**Analysis:** Survey respondents generally agreed that the ROP ensures plants are operated and maintained safely and securely. Some respondents commented that the PIs are lagging indicators of performance. The staff will address all comments in the consolidated response to the ROP external survey comments. This metric is met, with a stable trend over time.

**Metric Criterion Met:** Yes

**O-5 Stakeholders Perceive the ROP To Be Effective (e.g., High Quality, Efficient, Realistic, and Timely)**

**Definition:** Survey external and internal stakeholders asking whether NRC actions related to the ROP are high quality, efficient, realistic, and timely.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Effective, Open

**Analysis:** Survey respondents generally agreed that the ROP is effective, efficient, realistic, and timely. Some respondents commented negatively on the timeliness of the SDP, and one respondent expressed a concern about the NRC's handling of issues of low safety significance in the ROP. The staff will address these comments in the consolidated response to the ROP external survey comments. This metric is met, with a stable trend over time.

**Metric Criterion Met:** Yes

**O-6 Stakeholders Perceive That the ROP Ensures Openness**

**Definition:** Survey external and internal stakeholders asking if the ROP ensures openness in the regulatory process.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Open, Effective

**Analysis:** The survey respondents generally agreed that the ROP is an open process. Some survey respondents suggested that the NRC solicit feedback from stakeholders when revising or developing regulatory documents. The staff will respond to this suggestion in the consolidated response to the ROP external survey comments. This metric is met, with a stable trend over time.

**Metric Criterion Met:** Yes

**O-7 Opportunities for Public Participation in the Process**

**Definition:** Survey external and internal stakeholders asking if there are sufficient opportunities for the public to participate in the process.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Open, Effective

**Analysis:** The survey respondents generally appreciated the opportunities for public participation, especially in public meetings. One survey respondent suggested that public outreach can be improved. The staff will address this and other comments in its consolidated response. This metric is met, with a stable positive perception over time.

**Metric Criterion Met:** Yes

**O-8 Stakeholders Perceive the NRC To Be Responsive to Their Inputs and Comments**

**Definition:** Survey external and internal stakeholders asking if the NRC is responsive to the public's inputs and comments on the ROP.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Open, Effective

**Analysis:** The survey respondents agreed that, for the most part, the NRC is responsive to inputs and comments. Some survey respondents indicated that public comments have little impact on the NRC's established positions. The staff will address these comments in the consolidated response to the ROP external survey comments. This metric is met, with a stable positive perception over time.

**Metric Criterion Met:** Yes



**O-9 Stakeholders Perceive That the ROP Is Implemented as Defined**

**Definition:** Survey external and internal stakeholders asking if the ROP has been implemented as defined by program documents.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Predictable, Understandable, Open

**Analysis:** The survey respondents generally agreed that the ROP is being implemented as defined by program documents. The staff will address two comments received, one on interpretation of guidance and one on consistency among all four regions, in its consolidated response to the ROP external survey comments. This metric is met, with mostly positive comments and a stable positive perception over time.

**Metric Criterion Met:** Yes

**O-10 Stakeholders Perceive That the ROP Does Not Result in Unintended Consequences**

**Definition:** Survey external and internal stakeholders asking if the ROP results in unintended consequences.

**Criteria:** Expect stable or increasingly positive perception over time.

**Goals Supported:** Effective, Open

**Analysis:** The survey respondents indicated that the ROP generally does not result in unintended consequences. Some respondents commented that the staff's plans to reintegrate the security cornerstone back into the ROP assessment process could potentially result in a higher number of plants in the degraded cornerstone column of the ROP Action Matrix. The staff will address these comments in the consolidated response to the ROP external survey comments. This metric is met, with a stable positive perception over time.

**Metric Criterion Met:** Yes

**O-11            Analysis of the NRC's Responses to Significant Events**

**Definition:** Review reports from incident investigation teams (IITs) and augmented inspection teams (AITs) to collect lessons learned regarding ROP programmatic deficiencies (i.e., did the baseline inspection program inspect this area? did the SDP accurately characterize resultant findings?). IITs already have the provision to determine NRC program deficiencies. The Office of Nuclear Reactor Regulation/Division of Inspection and Regional Support will review AITs to identify any weaknesses.

**Criteria:** Expect no major programmatic voids.

**Goals Supported:** Effective, Predictable

**Analysis:** No IITs were conducted during CY 2011. One AIT was conducted in CY 2011 at North Anna Power Station. The staff did not identify any lessons learned or programmatic deficiencies in the ROP.

**Metric Criteria Met:** Yes

## **O-12 Analysis of Inspection Hours and Resource Expenditures**

**Definition:** Annually, collect and analyze resource data (e.g., DIE, preparation and documentation, plant status hours) for baseline, supplemental/plant-specific, and safety issues inspections, and other ROP activities.

- Criteria:**
- (1) Significant deviations are not expected on an annual basis. Explore reasons for any deviations that may be evident.
  - (2) Track and trend resource usage for the baseline inspection program and supplemental/plant-specific inspections. Analyze causes of any significant departure from established trend.
  - (3) Track and trend resource usage for preparation, documentation, and other ROP activities and assess the effects on budgeted resources.

**NOTE:** This metric is intended primarily for tracking and trending resource usage for the ROP. The results are used to improve the efficiency and effectiveness of the ROP and to make management and budget decisions. A detailed ROP resource analysis is included in the annual Commission paper on ROP self-assessment.

**Goals Supported:** Effective, Predictable

**Analysis:** Baseline inspection hours include direct inspection effort, baseline inspection preparation and documentation, and plant status activity. Baseline inspection hours increased slightly in 2011 when compared with 2010, but the change was less than one percent and therefore not statistically significant.

Plant-specific inspections include supplemental inspections conducted in response to greater-than-green inspection findings and performance indicators; reactive inspections, such as augmented team inspections and special inspections performed in response to events; and the infrequently performed inspections listed in Appendix C, "Special and Infrequently Performed Inspections," to NRC Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program—Operations Phase," dated September 24, 2009, and Appendix C, "Generic, Special, and Infrequent Inspections," to IMC 2201, "Security Inspection Program for Commercial Nuclear Power Reactors," dated September 8, 2009, which are not part of the baseline or supplemental inspection programs. Plant-specific inspection effort decreased in 2011 when compared to 2010. However, effort in this area for 2011 remains higher than 2009 due to a few resource-intensive, plant-specific circumstances in both 2010 and 2011, which were not a factor in 2009. Some of these plant-specific inspections are still ongoing.

Generic safety issue inspections are typically one-time inspections of specific safety and security issues, with significant variability in effort possible from year to year. A significant increase in inspection effort in this area was seen during 2011. This is primarily the result of inspections conducted in response to the events at the Fukushima Daiichi Nuclear Station in Japan.

Regional effort for licensee performance assessment has shown a decreasing trend, particularly when compared to CY 2009, but the numbers are in line with

previous years and don't appear to indicate a statistically significant trend.

The effort reported for other activities includes inspection-related travel, the significance determination process (SDP), and routine communication that encompasses regional support, enforcement support, and the review of technical documents. The increase in 2011 for these other activities was primarily in routine communication activities.

Fluctuations were noted in the baseline, plant-specific, and generic safety issues inspections, as well as in the performance assessment and other ROP support activities, which demonstrates the typical level of variation from year to year. No significant deviations were noted in CY 2011.

**Metric Criteria Met:** Yes

**O-13 Analysis of Resident Inspector Demographics and Experience**

**Definition:** Annually, collect and analyze data in order to determine the relevant inspection experience of the resident inspector (RI) and senior resident inspector (SRI) population. The following four parameters will be measured and analyzed for both RIs and SRIs to ensure that the NRC maintains a highly qualified resident inspection staff:

- (1) "NRC time" is the total number of years the individual has accumulated as an NRC employee.
- (2) "Total resident time" is the total number of years the individual has accumulated as an RI or SRI.
- (3) "Current site time" is the total number of years spent as an RI or SRI at the current site.
- (4) "Relevant non-NRC experience" is nuclear power experience acquired outside of the NRC. Examples of relevant non-NRC experience are operation, engineering, maintenance, or construction experience with commercial nuclear power plants, naval shipyards, U.S. Department of Energy facilities, or the U.S. Navy nuclear power program.

**Criteria:** None; trend only. Provide reasons for any meaningful increase or decrease in these resident demographic metrics.

**NOTE:** This metric is intended primarily for tracking and trending resident inspection experience. The results are used to make any modifications to the RI and/or SRI programs necessary to attract and retain highly qualified inspectors to the respective programs. The annual Commission paper on ROP self-assessment presents a detailed resident demographic and staffing analysis, including additional charts, data, and analysis for this metric.

**Goals Supported:** Effective, Predictable

**Analysis: RI Group Experience**

Analysis of the data summarized in Figure 1, RI Group Median Experience 5-Year Trend, reflects a downward trend in median relevant non NRC experience for the RI group, declining from 10.4 years in 2007 to 4.5 years in 2011. The rate of decline is lessening. To better evaluate the total experience base, the median figures for NRC time and relevant non-NRC experience were summed to "total experience," which declined from 14.6 years in 2007 to 9.8 years in 2010 but leveled off and remained constant at 9.8 years in 2011. This reflects a balance, between 2010 and 2011, between the rate of decline in relevant non-NRC experience and the rate of increase in NRC time. No other meaningful trend was observed for the RI group.

Analysis of the data summarized in Figure 1a, RI Group Mean Experience 5-year Trend, reflects trends similar to- but less pronounced than those reflected in

Figure 1. These trends include a downward lessening trend in mean relevant non-NRC experience for the RI group, declining from 11.6 years in 2007 to 7.1 years in 2011. Total experience likewise declined from 17.1 years in 2007 to 13.2 years in 2010 but rose slightly to 13.5 years in 2011. This reflects the result of a lessening downward trend in relevant non-NRC experience combined with an increasingly positive trend in NRC time, which increased from 5.7 years to 6.5 years between 2010 and 2011. No other meaningful trend was observed for the RI group.

Analysis of the data summarized in Figure 2, 2011 RI Group Median Experience by Region, reveals a Region I RI group median relevant non-NRC experience of 0.0 years (e.g., slightly more than half of the Region I RI group population reported no relevant non-NRC experience). This value remains unchanged from last year. The relevant non-NRC experience median ranges from 2.3 to 6.0 years among the other regions. The NRC average is 4.5 years. The lower Region I relevant non-NRC experience is offset by the Region I NRC time median of 6.2 years, which is higher than the other regions and the NRC average of 5.3 years. Analysis of the data summarized in Figure 2a, 2011 RI Group Mean Experience by Region, reveals no significant variability between regions in RI group mean experience values.

Overall, the RI group analysis revealed a five-year declining trend in Relevant Non-NRC experience from 2007 to 2011 and a recent increase in NRC time resulting in declining total experience between 2007 and 2010, stabilizing between 2010 and 2011.

According to SECY-11-0180, "Effectiveness Review of Actions to Enhance Relocation and Retention of Employees," dated December 21, 2011, external events continue to cloud the effectiveness review and to challenge the effectiveness of actions to enhance relocation and retention of employees. The review specifically notes the distressed job and housing markets continue to be external influences on the decisions of RIs and on those considering the RI program. The same factors apply to determining the specific causes for those trends identified in this review.

### **SRI Group Experience Analysis**

Analysis of the data summarized in Figure 3, SRI Group Median Experience 5-Year Trend, like the RI group, reflect a four-year upward trend in total resident time, rising from 6.8 years in 2008 to 8.6 years in 2011. Unlike the declining trend in relevant non-NRC experience in the RI group, the SRI group reflects only small fluctuations with the 2011 value of 9.4 years equal to that in 2008. Also unlike the increase in total experience between 2010 and 2011 in the RI group, the SRI group total experience declined slightly from 9.7 years in 2010 to 9.5 years in 2011.

Analysis of the data summarized in Figure 3a, SRI Group Mean Experience 5-Year Trend, reflects a steady increase in NRC time from 11.7 years in 2007 to 12.8 years in 2011. Likewise, Total resident time has trended upward from 8.8 years in 2007 to 9.8 years in 2011. Relevant non-NRC experience increased from 10.5 years in 2007 to 11.4 years in 2010 but subsequently declined to 10.7

years in 2011. Total experience trended upward from 22.2 years in 2007 to 23.9 years in 2010 but declined to 23.5 years in 2011.

Analysis of the data summarized in Figure 4, 2011 SRI Group Median Experience by Region, and in Figure 4a, 2011 SRI Group Mean Experience by Region, reveals no significant variability between regions in SRI group experience values.

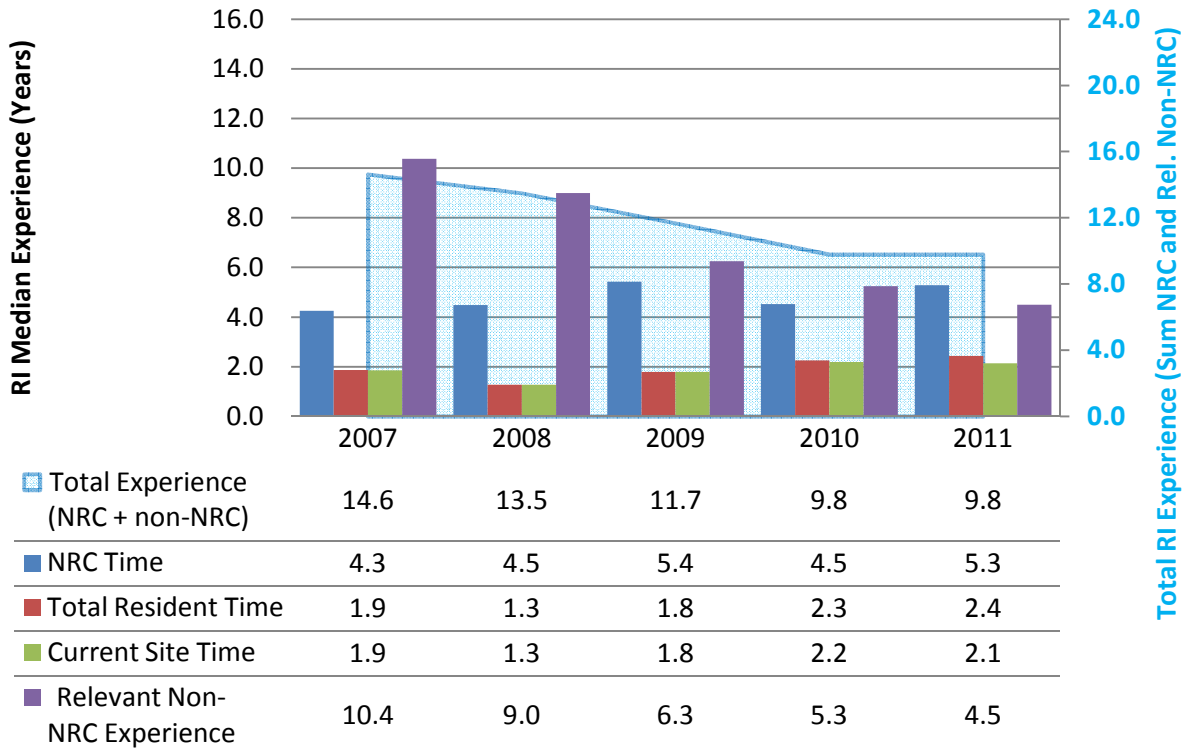
Overall, the SRI group experience analysis revealed no substantial trends or regional deviations. Experience levels remain relatively high. However, given that the SRI group is comprised predominantly of former RI's (e.g. 9 of 14 RI's that turned over in 2011 became SRIs), there is a reasonable likelihood that some RI group experience trends, such as the declining trend in relevant non-NRC experience, will migrate into the SRI group as those RI's are promoted to SRI positions.

Based on the annual resident demographic analysis, the staff concluded that sites continue to be staffed with knowledgeable and experienced RIs and senior resident inspectors (SRIs).

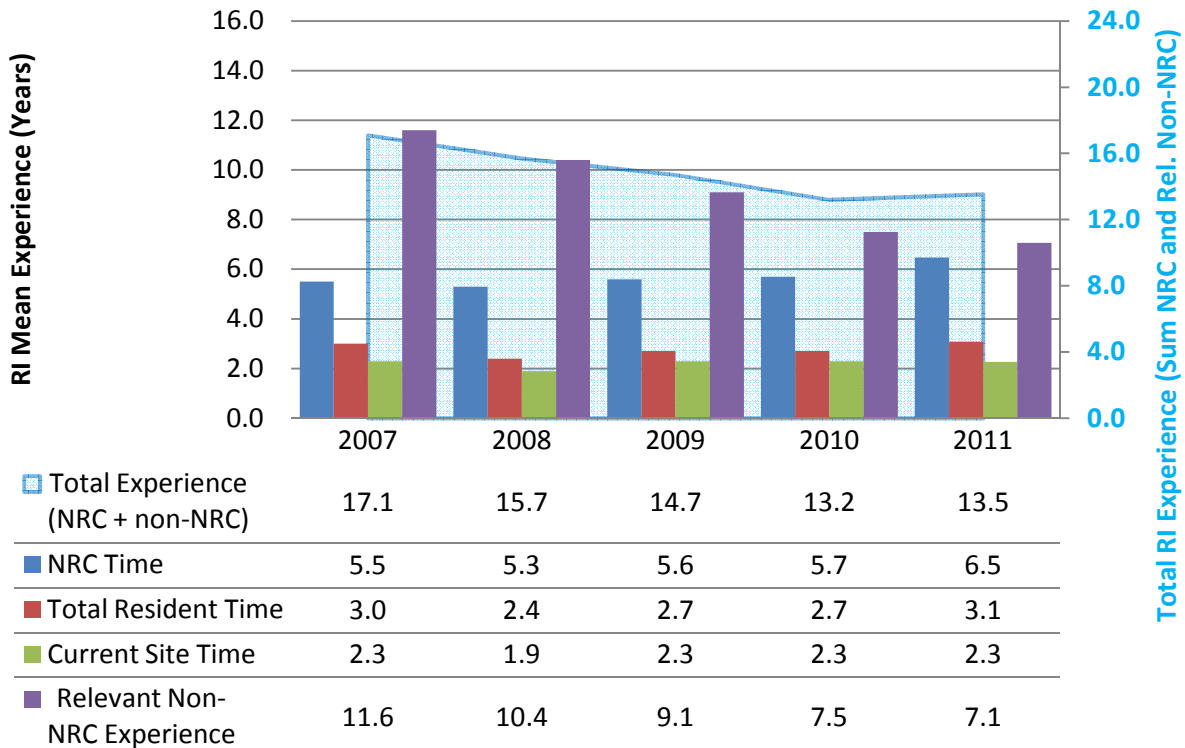
**Metric Criteria Met:** Yes because trend analysis was performed



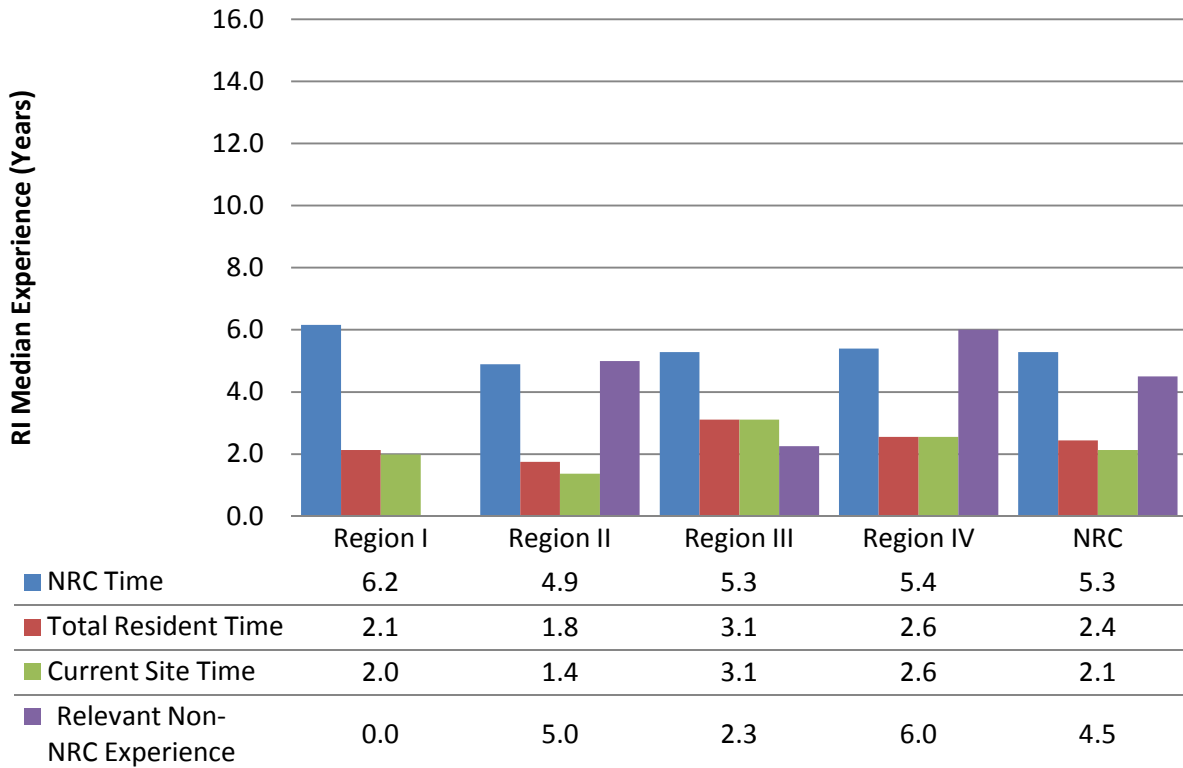
**Figure 1 RI Group Median Experience 5-Year Trend**



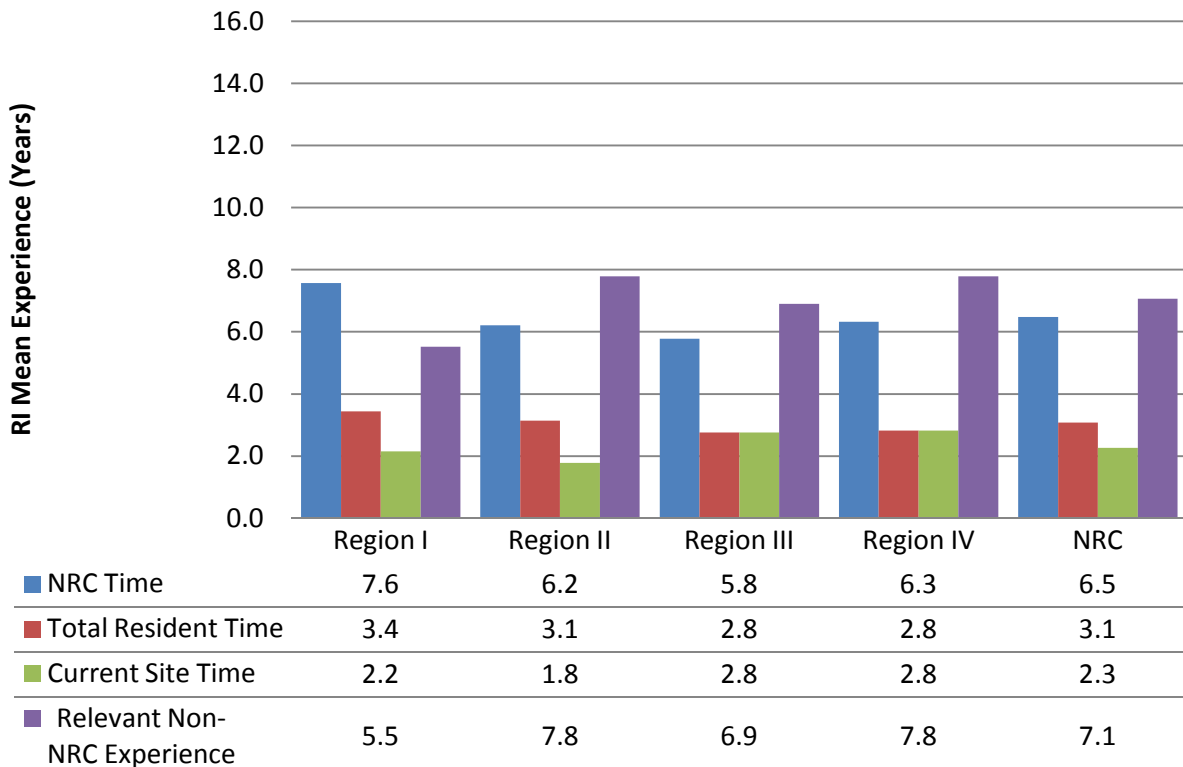
**Figure 1a RI Group Mean Experience 5-Year Trend**



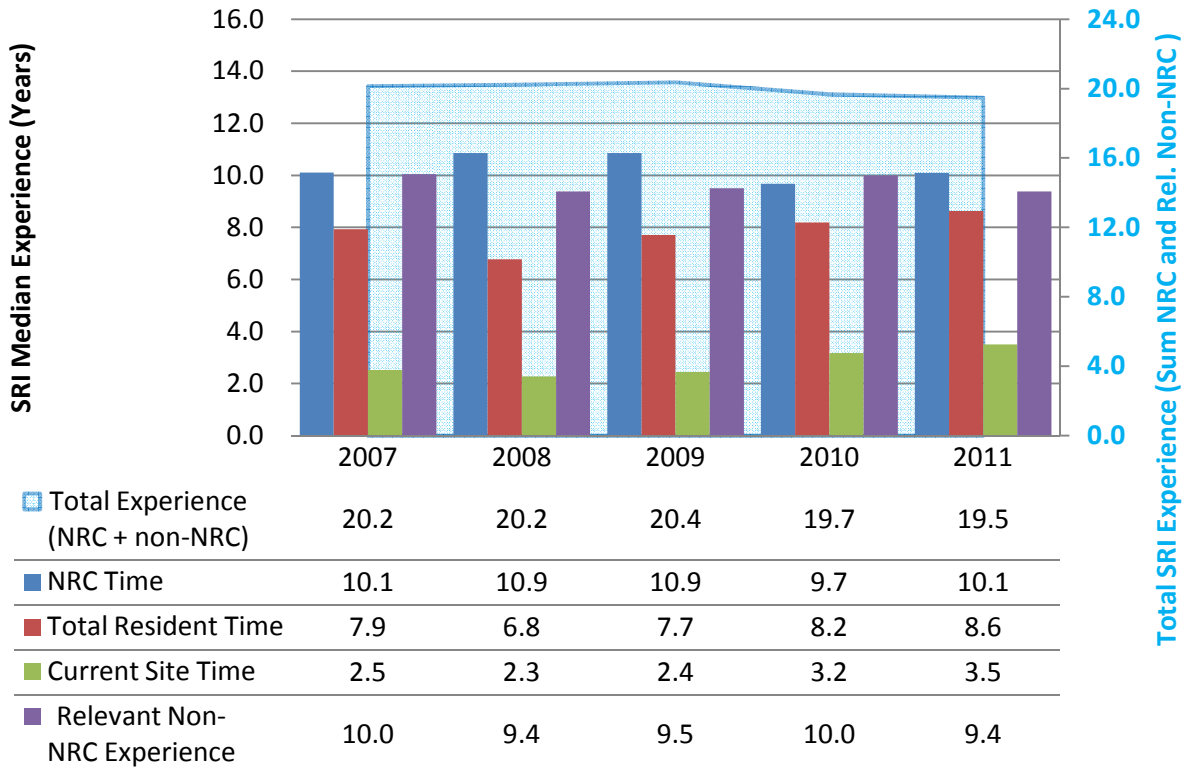
**Figure 2 2011 RI Group Median Experience by Region**



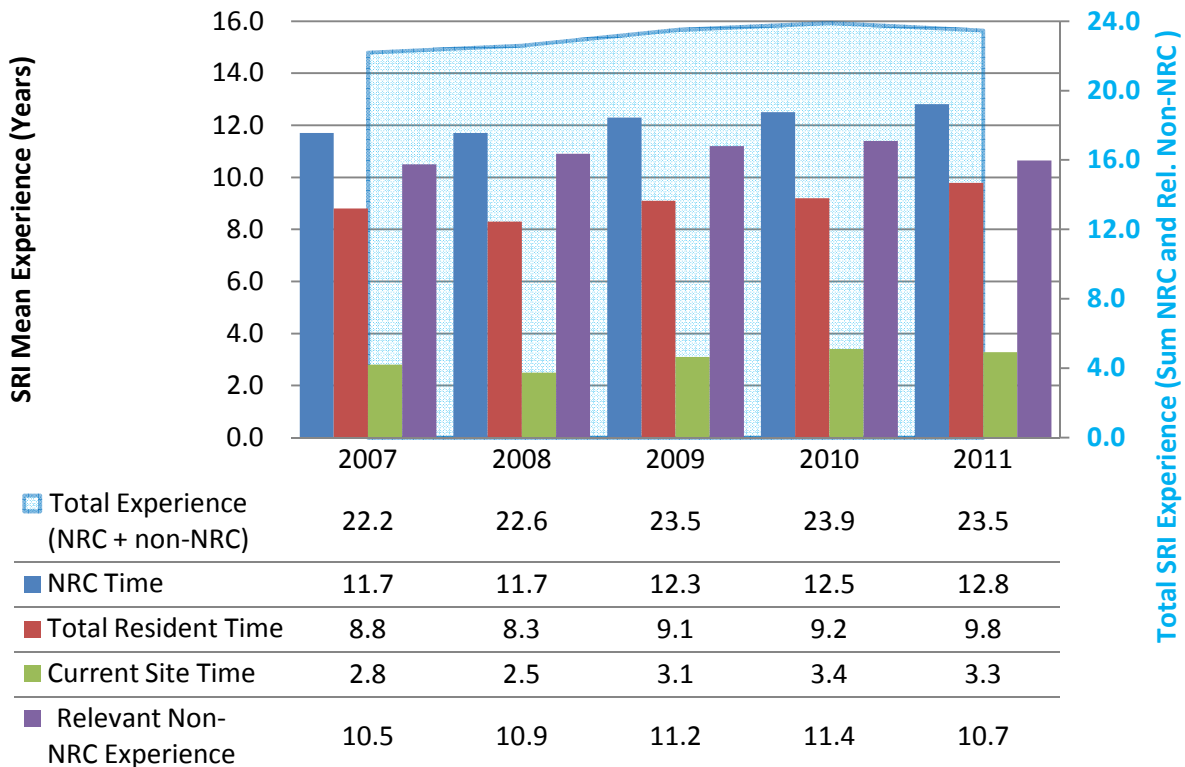
**Figure 2a 2011 RI Group Mean Experience by Region**



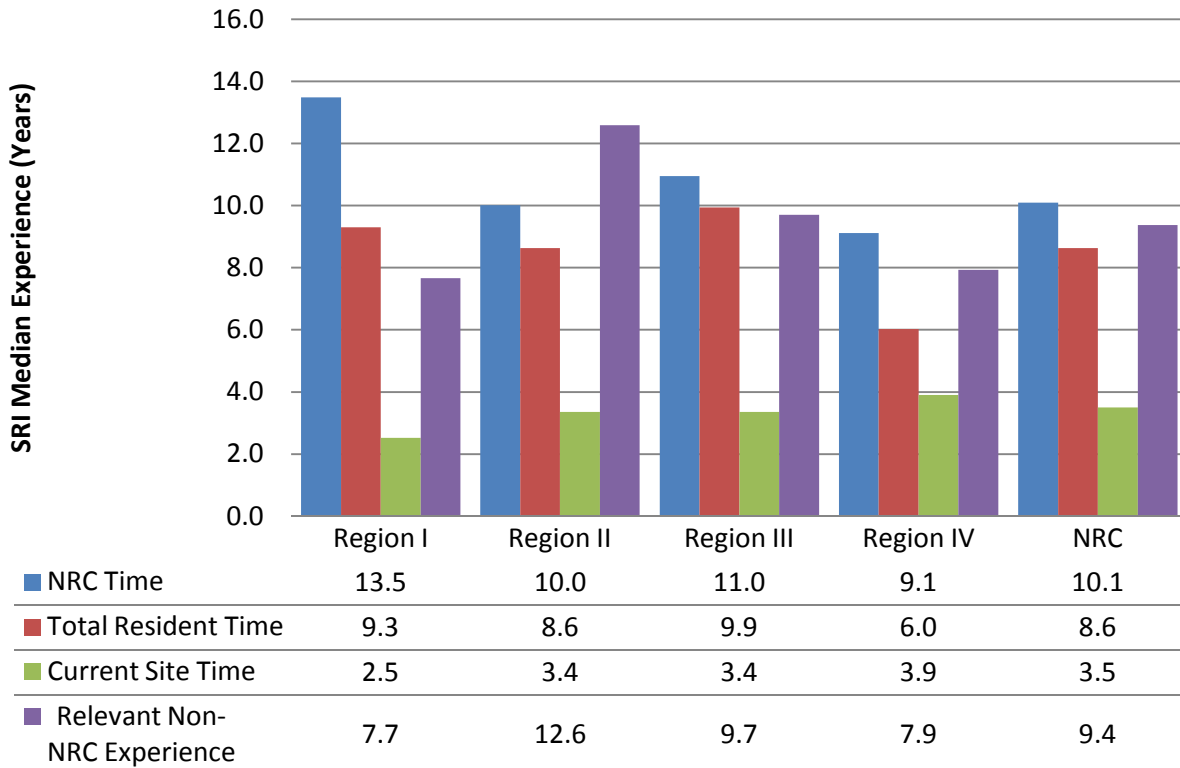
**Figure 3 SRI Group Median Experience 5-Year Trend**



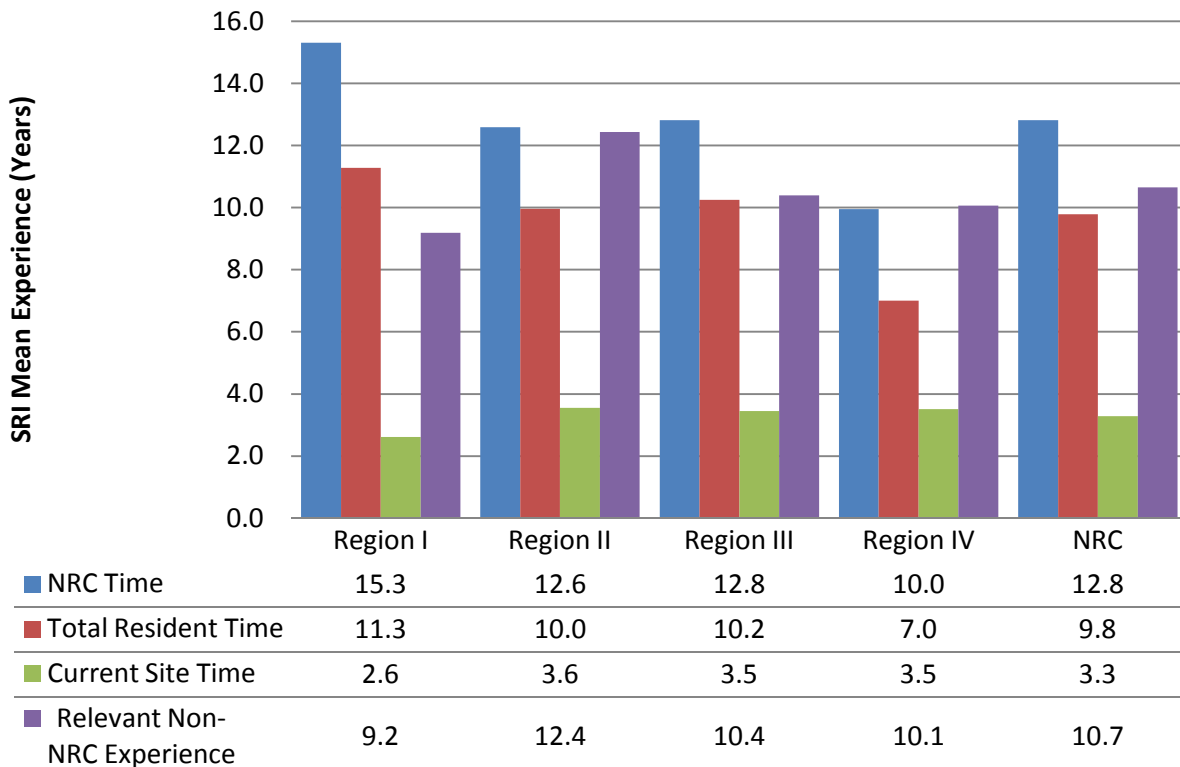
**Figure 3a SRI Group Mean Experience 5-Year Trend**



**Figure 4 2011 SRI Group Median Experience by Region**



**Figure 4a 2011 SRI Group Mean Experience by Region**



**O-14 Analysis of Site Staffing**

**Definition:** Annually, collect and analyze data to measure the permanent inspector staffing levels at each of the reactor sites for both RIs and SRIs in order to evaluate the agency's ability to provide continuity of regulatory oversight.

The staff developed a site staffing metric of 90 percent programwide in response to a recommendation by the Davis-Besse Lessons Learned Task Force (DBLLTF). The purpose of the metric is to evaluate the agency's ability to provide continuity of regulatory oversight through timely assignment of permanent RI/SRI staff. Specifically, DBLLTF Item 3.3.5.3 recommends that the staff establish a measurement for RI/SRI staffing, including program expectations to satisfy minimum staffing levels.

**Criteria:** The criterion is set at 90 percent programwide. Any single site that falls below 90 percent will be individually evaluated. Provide reasons for any meaningful increase or decrease in the inspector staffing level at reactor sites.

**NOTE:** Inspectors assigned to the site permanently or through a rotation with a minimum duration of 6 weeks shall be counted. Inspectors on 6-week or longer rotational assignments will be identified as such. Inspectors assigned to the site for less than 6 weeks will not be counted but should be indicated as such. Additionally, the regions shall indicate sites where permanently assigned RIs or SRIs are away from the site for an extended time (one continuous period greater than 6 weeks). Only inspectors who have attained at least a basic inspector certification status, as defined by Appendix A, "Basic-Level Training and Qualification Journal," to IMC 1245, "Qualification Program for Operating Reactor Programs," shall be counted.

Data will indicate the number of days a qualified RI and SRI are permanently assigned to the site during the year divided by the number of days in the year. Number of days spent on training, meetings away from the site, participation in team inspections, leave, or other temporary duties (e.g., acting for Branch Chiefs in their absence) will not be counted against the metric unless the absence exceeds 6 continuous weeks.

**Goals Supported:** Effective, Predictable

**Analysis:** Site staffing analysis seeks to evaluate the agency's ability to provide continuity of regulatory oversight through timely assignment of permanent RI/SRI staff in response to a DBLLTF recommendation. Specifically, Item 3.3.5.3 recommended that the staff establish a measurement for RI/SRI staffing, including program expectations to satisfy minimum staffing levels. The staff developed and began tracking a site staffing metric of 90 percent programwide in response to that recommendation.

Permanent<sup>1</sup> inspector staffing levels at each of the reactor sites were analyzed

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<sup>1</sup> Permanent in this context refers to inspectors assigned to the site permanently or through a rotation with a minimum duration of 6 weeks. Sites where permanently assigned RIs or SRIs are away from the site for a continuous period longer than 6 weeks will be considered gapped unless the positions are filled

for both RIs and SRIs to evaluate the agency's ability to provide continuity of regulatory oversight. Only inspectors who have attained at least a basic inspector certification status, as defined in Appendix A, "Basic-Level Training and Qualification Journal," to IMC 1245, "Qualification Program for Operating Reactor Programs," both dated December 29, 2011, were counted.

The data reflect the number of days a qualified RI and SRI were permanently assigned to the site divided by the number of days in the period. In accordance with the metric criterion in Appendix A to IMC 0307, any site that fell below 90 percent was individually evaluated to establish reasons for any meaningful increase or decrease in the inspector staffing level. IMC 0307 provides details on the site staffing goal.

Analysis of the data summarized in Figure 7, 2011 Permanent Site Staffing Performance by Region, confirms that all regions exceeded the 90 percent criteria with a programwide 98.5 percent annual average for 2011. This was approximately equivalent to 2010 performance. Regional annual averages ranged from 97.0 to 99.9 percent. Quarterly averages ranged from 96.6 to 100.0 percent.

Analysis of the data summarized in Table 1, Individual Permanent Site Staffing Performance 5-Year Trend, reveals that, in 2011, three sites reported annual permanent site staffing rates of 84, 87, and 77 percent, respectively, and were evaluated individually. The first site, Brunswick, experienced periods when the RI position had a gap while the RI completed an SRI rotational assignment elsewhere and following permanent reassignment of the RI to SRI at another site. There were also periods when rotational assignees staffed the site for less than 6 weeks. At the second site, Vogtle, there was a gap in the RI position while the RI completed an SRI rotational assignment elsewhere. The third site, Grand Gulf, had a gap due to difficulties in filling the RI position.

Site coverage at all three sites was maintained using nonpermanent inspector assignments. As reflected in Table 1, the number of sites reporting challenges in maintaining 90 percent permanent annual site staffing has declined steadily. The year 2011 equals 2010's best recorded performance since 2007 at three sites with less than 90 percent permanent annual site staffing.

**Metric Criteria Met:** Yes

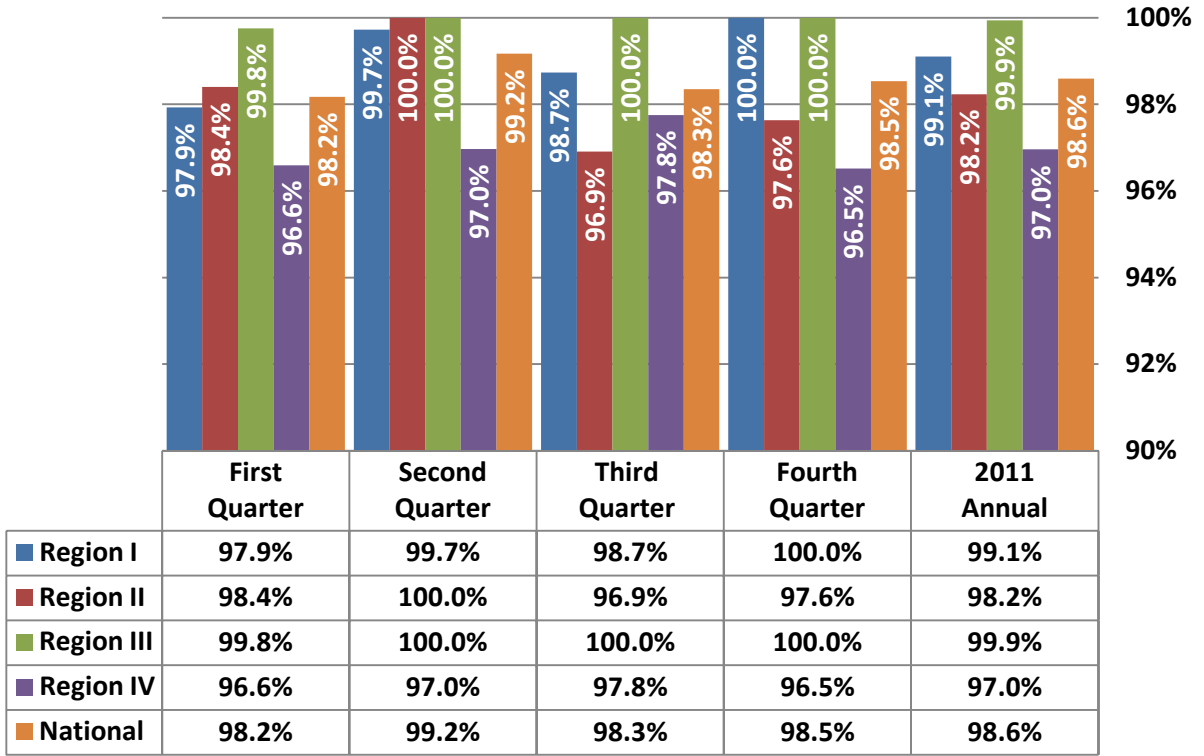
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through a rotation with a minimum duration of 6 weeks. Away periods for training, meetings, team inspections, leave, or other temporary duties are not counted against the goal unless the absence exceeds 6 continuous weeks.

**Table 1 Individual Permanent Site Staffing Performance 5-Year Trend**

<i>Instances of Annual Site-Specific Staffing &lt; 90%</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>
Number of Sites with < 90% site staffing	9	5	5	3	3

**Figure 7 2011 Permanent Site Staffing Performance by Region**



**O-15 Analysis of ROP Training and Qualifications**

**Definition:** Annually, evaluate the implementation of IMC 1245, particularly as it pertains to ROP implementation.

**Criteria:** None; trend only. Summarize and evaluate the training accomplished over the previous year and propose program improvements as necessary to address noted concerns.

**NOTE:** This metric is intended primarily for tracking and trending the effectiveness of the ROP training and qualifications programs. The annual Commission paper on ROP self-assessment includes a discussion of training effectiveness.

**Goals Supported:** Effective, Predictable, Understandable

**Analysis:** The staff continued to improve the initial and continuing inspector training programs to produce and maintain well-qualified, competent inspectors. The NRC reviewed recommendations the staff identified in accordance with the ROP feedback process and incorporated the improvements into inspector training standards, as appropriate. The staff developed and implemented training in CY 2011 to ensure that the inspectors remain efficient and effective in determining the safety and security significance of identified performance issues. Specifically, the staff developed a new advanced-level qualification standard for electrical inspectors, implemented training on the Maintenance Rule, and conducted refresher training on writing power-reactor inspection reports and the use of regulatory guides. In addition, the NSIR staff continues to develop a cyber-security training program for NRC inspectors and plans to conduct a more advanced training course late in CY 2012.

**Metric Criteria Met:** Yes because trend analysis was performed



**O-16 Analysis of Regulatory Impact**

**Definition:** Annually, collect and analyze licensee feedback and develop a summary of regulatory impact forms that are critical of the ROP.

**Criteria:** None; trend only. Summarize and evaluate the feedback received and propose program improvements as necessary to address common concerns.

**NOTE:** This metric is intended primarily for tracking and trending regulatory impact. The annual Commission paper on ROP self-assessment includes a detailed regulatory impact summary.

**Goals Supported:** Effective, Open, Understandable

**Analysis:** Over the past year, the staff received and compiled feedback from 92 site visits to 50 reactor sites across all four regions. These visits resulted in 185 distinct comments that fell into two main categories—formal communications with licensees and inspector performance. Of the comments compiled, 92 percent were favorable and 8 percent were unfavorable. The favorable percentage and distribution of comments were similar to previous years. Enclosure 2 of the 2011 annual ROP self-assessment SECY (ADAMS Accession No. ML12053A236) provides a summary of the feedback received and the staff's evaluation and actions to address the noted concerns.

**Metric Criteria Met:** Yes because trend analysis was performed