

POLICY ISSUE INFORMATION

April 8, 2012

SECY-12-0055

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: REACTOR OVERSIGHT PROCESS SELF-ASSESSMENT FOR
CALENDAR YEAR 2011

PURPOSE:

The purpose of this paper is to present the results of the U.S. Nuclear Regulatory Commission (NRC) staff's annual self-assessment of the Reactor Oversight Process (ROP) for calendar year (CY) 2011.

SUMMARY:

The results of the CY 2011 self-assessment indicate that the ROP met its program goals and achieved its intended outcomes. The staff found that the ROP met the agency's strategic goals of ensuring safety and security through objective, risk-informed, understandable, and predictable oversight. The staff implemented several ROP improvements in CY 2011, and will continue to solicit input from the NRC's internal and external stakeholders to further improve the ROP based on feedback and lessons learned.

BACKGROUND:

The staff performed the CY 2011 self-assessment in accordance with Inspection Manual Chapter (IMC) 0307, "Reactor Oversight Process Self-Assessment Program," dated March 23, 2009. The staff has issued an ROP self-assessment Commission paper annually since ROP implementation in 2000 and has briefed the Commission on the results following the Agency Action Review Meeting (AARM). The Commission provides the staff with direction as a result of this briefing in the form of a staff requirements memorandum (SRM). In SRM M110527, "Briefing on the Results of the Agency Action Review Meeting, May 27, 2011," dated June 3, 2011, the Commission did not identify any new requirements for staff action.

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The ROP self-assessment program uses program evaluations and performance metrics to evaluate the overall effectiveness of the ROP in meeting its preestablished goals and intended outcomes. The ROP includes the four specific program goals of being objective, risk informed, understandable, and predictable, as well as the applicable organizational excellence objectives (e.g., openness and effectiveness) from the NRC's Strategic Plan for Fiscal Years (FY) 2008–2013. The program goals and organizational excellence objectives support the NRC's mission and its strategic goals of safety and security. IMC 0307 specifies the intended outcomes of the ROP, which help form its basis and are incorporated into the ROP processes.

DISCUSSION:

The staff conducted numerous activities during the 12th year of ROP implementation (CY 2011) and obtained data from many sources to ensure that it performed a comprehensive and robust self-assessment. Data sources included the ROP performance metrics described in IMC 0307, internal and external stakeholder feedback, and direction and insight that the Commission has provided in recent years. The staff analyzed this information to gauge ROP effectiveness and potential areas for improvement. The scope of the staff's self-assessment included key ROP program areas, ROP communication activities, independent and focused evaluations, ROP resources, and resident inspector (RI) demographics and staffing.

The staff performed evaluations in all four key ROP program areas: the performance indicator (PI) program, inspection program, significance determination process (SDP), and assessment program. The staff noted that the PI program continued to offer insights into ensuring plant safety and security, and the staff made several improvements to PI program guidance and implementation in CY 2011. NRC inspectors independently verified that licensees operated plants safely and securely, and the staff improved the inspection program through its biennial realignment process and continual integration of operating experience. Most notably, the staff promptly developed and implemented two separate inspections in response to the Fukushima Daiichi accident in Japan to ensure that there were no immediate safety issues at reactor sites in the United States and to gather information to inform the agency's licensing process. These prompt actions reflect the flexibilities and responsiveness of the ROP in addressing emergent potential safety vulnerabilities and verifying compliance with requirements, while working systematically with the agency's licensing process. The SDP continued to be an effective tool for determining the safety and security significance of inspection findings, and the staff made several improvements to the SDP guidance and made significant progress on other SDP initiatives. Of note, the staff perceived the need to develop an SDP tool for evaluating the significance of licensed operator performance issues. Staff implementation of the assessment program ensured that staff and licensees took appropriate actions to address performance issues in CY 2011, commensurate with their safety significance. Enclosure 1, "Reactor Oversight Process Program Area Evaluations," provides details on these ROP program evaluations.

In summary, the staff completed several significant actions in CY 2011 to improve the efficiency and effectiveness of the ROP, many of which address the commitments made as a result of last year's self-assessment.

- The staff prepared SECY-11-0076, "Improving the Public Radiation Safety Cornerstone of the Reactor Oversight Process," dated June 9, 2011, to request Commission direction

on possible enhancements to performance assessment tools within the Public Radiation Safety Cornerstone.

- The staff evaluated and reported on the effectiveness of the relocation and retention enhancements for RIs in SECY-11-0180, "Effectiveness Review of Actions to Enhance Relocation and Retention of Employees," dated December 21, 2011.
- The staff issued SECY-11-0073, "Staff Proposal to Reintegrate Security into the Action Matrix of the Reactor Oversight Process Assessment Program," dated June 5, 2011, proposing to include the Security Cornerstone in the ROP assessment program, which is governed under IMC 0305, "Operating Reactor Assessment Program," dated July 6, 2011.
- The staff reported to the Commission, in a memorandum dated June 6, 2011, its final results on how the proposed enhancements to the force-on-force physical protection SDP would improve on the CY 2009 force-on-force exercise findings.
- A working group is evaluating the need to revise ROP program guidance and training, as necessary, to ensure alignment with the Commission's "Final Safety Culture Policy Statement" (76 *Federal Register* (FR) 34773; June 14, 2011).

The staff continued to improve the ROP based on feedback from all stakeholders. The staff used a variety of communication vehicles to ensure that all stakeholders have access to ROP information and results and have an opportunity to participate in the process and provide feedback. The staff continued to conduct monthly public meetings with external stakeholders and conducted a survey to actively solicit and analyze external stakeholder feedback. The staff continued the internal feedback process and held biweekly telephone conferences and frequent meetings with internal stakeholders. In addition, the staff maintains the ROP Web pages to ensure that they remain useful tools for communicating accurate and timely information to all stakeholders.

The staff issued its external survey in an FR notice (76 FR 73738, "Solicitation of Feedback on the Effectiveness of the Reactor Oversight Process"; November 29, 2011), and used many other methods to maximize awareness of the survey's availability, including direct mailings, the NRC Web site, the NRC blog, and a press release. The survey requested responses to 20 questions specifically related to ROP performance metrics as defined in IMC 0307. The NRC received 15 responses to the survey; 7 were from utility representatives, 4 were from State or local officials, 2 were from the public, and 2 were from NRC employees. These responses are publicly available at the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML12033A103. The responses were generally positive, but some respondents noted concerns and areas for improvement. The number of CY 2011 survey responses was up from the CY 2009 and CY 2007 surveys and were more in line with previous years. Nevertheless, as a result of the limited number of survey participants, the staff plans to review the content and frequency of the ROP surveys and plans to explore alternative venues to obtain stakeholder feedback.

All 45 performance metrics for the ROP met the established criteria as defined in Appendix A, "Reactor Oversight Process Self-Assessment Metrics," dated March 23, 2009, to IMC 0307. Enclosure 1 contains a brief discussion of the staff's analysis of the performance metrics and

external survey responses for each ROP program area. The annual ROP performance metric report provides data and a staff analysis for each ROP metric as well as additional detail on the results and analysis of the external survey (ADAMS Accession No. ML12037A175). The staff plans to prepare a consolidated response to the CY 2011 external survey to address the comments more specifically. The staff will post this paper, the annual ROP performance metric report, and the consolidated response to the CY 2011 external survey to the ROP Web page.

The staff continued to implement the ROP reliability initiatives effectively in 2011. The Deputy Regional Administrators initiated these activities to improve ROP implementation through sharing inspection resources, conducting Branch Chief benchmarking visits to other NRC Regions, discussing reliability topics, and assessing inspection report quality.

The staff received and evaluated feedback from licensees as part of the regulatory impact process. Over the past year, the staff received and compiled feedback from 92 site visits to 50 reactor sites across all four regional offices. More than 90 percent of the 185 distinct comments were favorable and in line with the favorable percentage and distribution of comments from previous years, although some concerns were noted. Enclosure 2, "Regulatory Impact Summary," summarizes the feedback and the staff's evaluation and actions to address the concerns.

The NRC collects and analyzes industry-wide data to monitor the overall safety performance of operating plants. These industry-level data also serve as indicators of ROP effectiveness. The staff is reporting the FY 2011 results of the Industry Trends Program to the Commission in an annual paper that complements this paper. The results of the Industry Trends Program, along with the results of this annual self-assessment, will be reviewed at the AARM.

Overall staff effort to implement the ROP in CY 2011, as reflected in expended hours, increased by 1 percent compared with CY 2010. 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. Enclosure 3, "Reactor Oversight Process Resources," discusses ROP resources in greater detail.

Based on the annual resident demographic and site staffing analysis, the staff concluded that sites continue to be staffed with knowledgeable and experienced RIs and senior resident inspectors (SRIs). Staff turnover rates in both the RI and SRI ranks have remained relatively stable. The NRC initiated several actions to preserve an experienced and stable RI and SRI population, as described in SECY-09-0050, "Actions to Enhance Relocation and Retention for Employees," dated March 30, 2009. In accordance with the SRM dated June 26, 2009, the staff recently reported on the effectiveness of these enhancements in SECY-11-0180, as previously noted. The staff will continue to closely monitor RI and SRI demographics and site staffing in 2012. Enclosure 4, "Resident Inspector Demographics," provides detailed analyses of the 2011 RI and SRI demographics and site staffing.

COMMITMENTS:

The staff made five commitments in last year's ROP self-assessment to improve the efficiency and effectiveness of the ROP. The actions the staff has taken to address these commitments were summarized in the discussion above. Enclosure 1 contains additional details on these efforts.

The staff did not identify any specific commitments as a result of the CY 2011 self-assessment, but it will continue to make program improvements based on feedback and lessons learned.

CONCLUSIONS:

The self-assessment results for CY 2011 indicate that the ROP met program goals and achieved its intended outcomes. The ROP was successful in being objective, risk informed, understandable, and predictable. The ROP also ensured openness and effectiveness in support of the agency's mission and its strategic goals of safety and security. The NRC appropriately monitored operating nuclear power plant activities and focused agency resources on performance issues in CY 2011, and plants continued to receive a level of oversight commensurate with their performance. The ROP has developed into a mature oversight process over the past 12 years; however, the staff recognizes the value of continuous improvement and therefore, actively solicits stakeholder feedback to apply lessons learned and improve various aspects of the ROP.

RESOURCES:

NRC Headquarters and Regions need resources for ROP management, development, oversight, and licensee performance assessment activities. The table below includes estimates to conduct these activities in the Office of Nuclear Reactor Regulation (NRR), the Office of Nuclear Safety and Incident Response (NSIR), the Office of Nuclear Regulatory Research (RES), and the Regions.

The staff does not anticipate that these activities will utilize any resources beyond those already included in the FY 2012 Current Estimate and FY 2013 President's Budgets. Resources required beyond FY 2013 will be addressed during the Planning, Budgeting, and Performance Management process.

	FY 2012		FY 2013	
	FTE	\$K	FTE	\$K
NRR	30.8	1,055	30.8	1,105
NSIR	6.0	--	6.0	--
RES	9.7	3,170	9.7	3,455
Regions	37.7	--	37.7	--
TOTAL	84.2	4,225	84.2	4,560

The Commissioners

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COORDINATION:

The Office of the General Counsel has reviewed this Commission paper and has no legal objection. The Office of the Chief Financial Officer has reviewed this Commission paper and determined that there is no financial impact.

/RA by Martin J. Virgilio for/

R. W. Borchardt
Executive Director
for Operations

Enclosures:

1. Reactor Oversight Process Program
Area Evaluations
2. Regulatory Impact Summary
3. Reactor Oversight Process Resources
4. Resident Inspector Demographics

Reactor Oversight Process Program Area Evaluations

In accordance with Inspection Manual Chapter (IMC) 0307, "Reactor Oversight Process Self-Assessment Program," dated March 23, 2009, the U.S. Nuclear Regulatory Commission (NRC) staff evaluated all four key program areas of the Reactor Oversight Process (ROP). The four areas are the performance indicator (PI) program, the inspection program, the significance determination process (SDP), and the assessment program. The annual ROP performance metric report provides data and a staff analysis for all of the program area metrics (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12037A175). The results of the staff's review are provided below.

Performance Indicator Program

The PI program continued to provide insights to help ensure plant safety and security. The ROP met all of its PI program metrics for calendar year (CY) 2011, and feedback from the external stakeholder survey was generally positive. The staff and industry made several improvements to the PI program guidance and implementation in 2011 using feedback from internal and external stakeholders.

Based on industry stakeholder feedback, the staff developed an automatic e-mail tool to notify public and internal stakeholders of the availability of recently approved PI-related frequently asked questions (FAQs). These FAQs include changes to the PI reporting guidance document, Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, issued October 2009, and resolutions to PI guidance interpretation issues. To facilitate knowledge transfer, the staff added inspection tips and descriptions of PI reporting issues that inspectors identified to the program's internal SharePoint Web site. The staff and industry also clarified PI reporting guidance for the feedwater system in the Unplanned Scrams with Complications PI and for power changes to restore equipment in the Unplanned Power Changes per 7,000 Critical Hours PI.

The staff and industry completed changes to Mitigating System Performance Index (MSPI) guidance in NEI 99-02. These changes incorporated emergency diesel generator (EDG) fuel oil transfer pump failures into the MSPI and modified EDG failure mode definitions. The staff and industry clarified MSPI guidance for cascading unavailability and system boundaries. The staff revised Inspection Procedure (IP) 71151, "Performance Indicator Verification," dated December 23, 2011, to enhance MSPI inspection guidance in response to feedback from internal stakeholders. The staff also developed an internal SharePoint Web site for the MSPI that includes MSPI background material and training presentation slides. The staff plans to explore developing an MSPI training class for inspectors in 2012.

NEI 99-02 currently does not address PI validity during extended shutdown and startup conditions for some PIs. Therefore, to improve openness and predictability in NRC staff decision making and oversight, the staff proposed new guidance for NEI 99-02 on how to consider the validity of PIs under these conditions. The staff continues to discuss the proposed guidance and related information technology support with industry representatives at public ROP working group meetings. The staff plans to revise ROP inspection manual chapters and procedures, as necessary, when it finalizes the approach for determining PI validity and displaying PI status on the public Web site. The staff and industry also continue to explore any potential effects to the Safety System Functional Failure PI resulting from potential changes to

NUREG-1022, "Event Reporting Guidelines: 10 CFR 50.72 and 50.73," Revision 2, issued October 2000.

The staff continued efforts to improve and enhance the emergency preparedness (EP) PIs. The staff revised the Drill/Exercise Performance (DEP) PI to clarify the specific actions required to demonstrate successfully a DEP opportunity. The staff also revised the Emergency Response Organization (ERO) Drill Participation PI to allow data from multiple sites' ERO drill participations to be applied to ERO members serving in emergency response roles common to multiple sites. Staff and industry currently are working on clarifying the Alert and Notification System Reliability PI guidance for sirens intentionally removed from service in an area deemed uninhabitable by State or local agencies because of a natural disaster. The staff also revised inspection procedures to incorporate enhancements identified from the performance of Temporary Instruction (TI) 2515/175, "Emergency Response Organization, Drill/Exercise Performance Indicator, Program Review," dated June 5, 2008. The enhancements included using the results of the DEP PI to improve the effectiveness of EP inspection resources.

The staff continues to evaluate the need for new security PIs because of new requirements under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73, "Physical Protection of Plants and Materials;" 10 CFR Part 26, "Fitness for Duty Programs;" and the resultant changes to the baseline inspection program. The staff plans to reassess the effectiveness of the security PIs in 2013 as informed by the experience gained during the latest ROP realignment and the completion of one full security baseline inspection cycle.

Most external ROP survey respondents indicated that the PI program helped ensure plant safety and security, provided an appropriate overlap with the inspection program, was clearly defined and understandable, and contributed to the identification of performance outliers. Some respondents expressed concern about the PI performance-band thresholds, the NRC's enforcement response to PI reporting violations, exceptions allowed through the FAQ process, and the lack of safety culture PIs. The staff will evaluate this feedback and consolidate all responses to the external survey into a separate document.

Inspection Program

NRC inspectors independently verified, through the agency's baseline inspection program, that licensees operated plants safely and securely in CY 2011. All inspection program metrics met their established criteria during CY 2011, and the external feedback received was generally positive. Additionally, the staff promptly developed and completed two inspection activities in response to the Fukushima Daiichi accident in March 2011 to ensure that there were no immediate safety issues and to help determine the capability of each licensee site to respond to Fukushima-like accidents. Inspection results from these two inspections, 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)," were also used by the staff to inform the Agency's licensing and oversight processes. The implementation of these TIs demonstrated the ROP's responsiveness and flexibility to perform inspections as needed to verify compliance with requirements and address potential safety vulnerabilities.

Each NRC Region documented its CY 2011 completion of the baseline inspection program in a memorandum available under ADAMS Accession No. ML12039A276 for Region I, Accession No. ML120470605 for Region II, Accession No. ML12047A364 for Region III, and Accession No. ML12053A346 for Region IV. The agency completed all security baseline inspections in CY 2011, as required and documented in a memorandum from the Office of Nuclear Security and Incident Response (NSIR) (ADAMS Accession No. ML12037A094). However, this memorandum contains security-related information and is not publicly available.

The staff performed an in-depth effectiveness review of all baseline inspection activities through the ROP realignment process. The purpose of this activity was to ensure the most effective application of inspection resources used in the baseline inspection program. The ROP realignment working group consisted of staff from the Office of Nuclear Reactor Regulation (NRR), NSIR, and all four NRC Regions. The staff considered inspection results over a 3-year period, from January 2008 through December 2010. 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 staff revised nine baseline inspection procedures, which became effective beginning in CY 2012. Additional details on the results of the 2011 ROP realignment process are provided in "Reactor Oversight Process (ROP) Inspection Program Realignment Results—Calendar Year 2011," dated July 12, 2011 (ADAMS Accession No. ML11178A329).

To further integrate operating experience into inspection program guidance and to address a previous ROP self-assessment commitment, the inspection staff developed and issued IMC 2523, "NRC Application of Operating Experience in the Reactor Oversight Process," dated November 16, 2011. Its objectives were (1) to implement the applicable policies of Management Directive (MD) 8.7, "Reactor Operating Experience Program," dated September 28, 2006, (2) to emphasize the availability and applicability of the operating experience program for use within the NRC's inspection and assessment activities, and (3) to provide guidance on integrating operating experience into the ROP. Additionally, the staff recently issued two Operating Experience Smart Samples (OpESSs)—OpESS FY2012/01, "High Wind Generated Missile Hazards," dated December 29, 2011, and OpESS FY2012/02, "Technical Specification Interpretation and Operability Determination," dated January 6, 2012. The OpESS program provides inspectors with information on selected industry operating events that have generic applicability, have potential risk significance, and can be inspected readily through the baseline inspection program. In addition, the Operating Experience Branch continued to provide a summary of operating experience during the monthly ROP teleconference with the regional offices. The Operating Experience Branch also prepares a summary of notable operating experience—with a focus on the most recent 6 months of operating experience—to inform regional mid-cycle and end-of-cycle reviews of licensee performance.

The resident inspector (RI) and senior resident inspector (SRI) turnover rates have stabilized since 2008. RI and SRI turnover rates during CY 2011 were 19 percent and 12 percent, respectively. These rates represent an improvement over CY 2007. The staff informed the Commission of its assessment of the effectiveness of the agency's actions to enhance the relocation and retention of RIs and SRIs in SECY-11-0180, "Effectiveness Review of Actions To Enhance Relocation and Retention of Employees," dated December 21, 2011. This Commission paper contains sensitive information and is not publicly available. The staff

continues to monitor the attraction and retention of RIs and SRIs to ensure experienced and stable RI and SRI programs.

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.

In general, external stakeholders stated that the inspection program was effective in ensuring that areas important to safety and security are addressed appropriately. Some respondents commented on the need to create more flexibility in the baseline inspection program to allow additional inspection samples in areas where licensee programs had weaknesses. Other comments included the need to revise current ROP treatment of nonsafety modifications that could affect safety systems and how the ROP conducts and documents safety culture assessments. The staff will address these comments in its consolidated response to the external survey.

Significance Determination Process

The SDP continues to be an effective tool for determining the safety and security significance of inspection findings. In CY 2011, several SDP guidance improvements were implemented, and other initiatives made significant progress. The staff met the SDP timeliness metric for a sixth consecutive year, and no findings exceeded the 90-day goal. All other SDP performance metrics were met.

In response to ROP feedback and suggestions collected through the Risk Tools Enhancement (RTE) Program, the staff revised IMC 0609, "Significance Determination Process," dated June 2, 2011, along with several attachments and appendices. These documents focused on incorporating feedback, improving and clarifying the process where needed, and aligning guidance documents to reduce redundancy. The staff continued to develop and refine a new SDP for spent fuel pool (SFP) findings. The SDP currently is in draft form and requires additional internal review. Overall, the draft SDP focuses on findings involving SFP cooling and water inventory, fuel handling errors, and maintaining subcritical conditions.

The staff is evaluating development of a new or revised appendix to IMC 0609 to address licensed operator performance issues. Some recent plant events point to lapses in operator fundamentals, so the staff is examining ways to assess operator performance deficiencies using SDP tools. The current licensed operator requalification inspection (IP 71111.11, "Licensed Operator Requalification Program and Licensed Operator Performance," dated December 6, 2011) and accompanying SDP (Appendix I, "Licensed Operator Requalification Significance

Determination Process,” dated December 6, 2011) mainly focus on requalification examinations, maintenance of license conditions, and identification and correction of operator performance issues through requalification training. A new or revised SDP could be used to evaluate actual operator performance in controlling the reactor, covering impact on overall plant operations and safety, including shutdown and low power events and reactivity management.

The staff made significant progress incorporating the Systems Analysis Programs for Hands-on Integrated Reliability Evaluation (SAPHIRE), Version 8, and the associated Standardized Plant Analysis Risk (SPAR) models into the at-power SDP Phase 2 guidance in Appendix A, “Determining the Significance of Reactor Inspection Findings for At-Power Situations,” dated January 10, 2008, to IMC 0609. As part of the initiative, the staff created a pilot program that included approximately three sites per region. In spring CY 2011, the staff held several Webinar training sessions with regional pilot participants. These training sessions focused on the draft revisions to the IMC 0609 guidance as well as the use of risk tools in SAPHIRE 8 and the plant-specific SPAR models. Once they completed the training, pilot participants exercised the new guidance and tools for 3 months during the summer. After incorporating feedback and lessons learned from the pilot, the staff plans to issue revisions in CY 2012 to Attachment 4, “Phase 1—Initial Screening and Characterization of Findings,” dated January 10, 2008, and Appendix A to IMC 0609.

As committed to in last year’s self-assessment and requested in Commission Staff Requirements Memorandum (SRM) M100112, “Briefing on Office of Nuclear Security and Incident Response—Programs, Performance, and Future Plans,” dated February 12, 2010, the staff reported its results to the Commission on how the proposed enhancements to the FOF physical protection SDP would improve on the CY 2009 FOF exercise findings in a memorandum dated June 6, 2011. The NSIR staff has reviewed data on the impact of the proposed changes to the significance of findings and comments from internal and external stakeholders. The staff incorporated these data and comments into the proposed enhancements to the FOF SDP. The staff plans to begin briefing senior NRC management during the first quarter of CY 2012 and expects to brief external stakeholders and publish the final draft of the revised FOF SDP in July 2012. Additionally, the staff has evaluated the baseline security SDP and is enhancing the screening tools for safeguards information and physical protection findings first introduced in CY 2010. The staff is developing new guidance and processes for evaluating findings involving target set issues.

The NSIR staff has prepared a revision of Appendix B, “Emergency Preparedness Significance Determination Process,” to IMC 0609. This revision incorporates changes (1) to address the amended emergency preparedness (EP) regulations that became effective on December 23, 2011, (2) to address lessons learned since the last revision in 2006, (3) to incorporate provisions related to the use of the SDP for performance deficiencies associated with traditional enforcement violations, and (4) to reformat the document to increase clarity and usability. The NSIR staff has addressed regional comments and prepared a final version that the NRC plans to issue in the near future. Regional EP personnel have already been trained on the draft document.

Respondents to the external survey generally agreed that the SDP results in an appropriate regulatory response to performance issues. However, some stakeholders felt that the SDP did

not always result in an appropriate regulatory response, particularly for those inspection findings that rely on a more deterministic evaluation. Several respondents provided recommendations for improving the SDP guidance, which the staff plans to consider and incorporate as appropriate. The staff will provide detailed responses to the external survey in a consolidated response. The staff believes that the SDP focuses on safety issues, contributes to effective communications with the licensee and the public, and expends an appropriate level of resources.

Assessment Program

Staff implementation of the assessment program ensured that staff and licensees took appropriate actions to address performance issues in CY 2011, commensurate with their safety significance. All eight of the assessment metrics met their established criteria in CY 2011, and the responses to the external ROP survey were generally positive. The staff closed the one remaining open deviation related to ground water issues at Vermont Yankee and did not open any new deviations in CY 2011.

On July 6, 2011, the staff issued a revision to IMC 0305, "Operating Reactor Assessment Program," to improve its usability, incorporate stakeholder feedback and lessons learned from implementation issues, and simplify guidance for identifying substantive cross-cutting issues. The staff plans to continue to update and modify the assessment program's SharePoint Web site, which contains schedules, assessment-related documents, links, and announcements to improve the infrastructure for communicating assessment program information and more current plant assessment results.

The staff observed a decrease in the number of plants in the Degraded Cornerstone Column (Column 3) of the ROP Action Matrix in CY 2011 as compared to CY 2010. Furthermore, the number of plants in Column 3 is more in line with previous years. The number of plants in the Regulatory Response Column (Column 2) also decreased from the previous 2 years. The staff also observed a corresponding jump for the number of plants in the Licensee Response Column (Column 1). However, one plant entered the Multiple/Repetitive Degraded Cornerstone Column (Column 4) and another plant transitioned to the oversight process of IMC 0350, "Oversight of Reactor Facilities in a Shutdown Condition Due to Significant Performance and/or Operational Concerns," dated December 15, 2006. The staff plans to continue to monitor the performance of these and other operating reactors in CY 2012.

As was committed to in the CY 2010 ROP self-assessment, the staff issued SECY-11-0073, "Staff Proposal to Reintegrate Security into the Action Matrix of the Reactor Oversight Process Assessment Program," dated June 5, 2011, proposing to include the Security Cornerstone in the assessment program governed by IMC 0305. In the resultant SRM, the Commission approved the staff's proposal to reintegrate the Security Cornerstone into the ROP assessment program. The staff intends to implement this reintegration in CY 2012, and the staff plans to continue to update external stakeholders on the implementation status during the ROP monthly meetings. IMC 0320, "Operating Reactor Security Assessment Program," dated April 9, 2009, currently provides guidance for assessing licensee performance in the Security Cornerstone. Once the reintegration goes into effect, the staff plans to suspend the use of IMC 0320 and revise IMC 0305 to reflect that the ROP assessment process is solely governed by IMC 0305.

Based on the ROP Gap Analysis performed in CY 2010 and the staff commitment in the CY 2010 ROP self-assessment, the staff prepared SECY-11-0076, "Improving the Public Radiation Safety Cornerstone of the Reactor Oversight Process," dated June 9, 2011, to request Commission direction on possible enhancements to emphasize defense in depth in preventing, detecting, and mitigating ground water contamination. The Commission approved the staff's commitment to work with internal and external stakeholders on potential enhancements to the ROP, but it did not approve changes to the ROP related to ground water contamination control. The staff plans to engage various stakeholders in CY 2012 to explore possible enhancements in the Public Radiation Safety Cornerstone. As directed in the SRM, the staff will inform the Commission in a notation paper of any proposed revisions to the NRC's regulatory program in this area.

The NRC issued its "Final Safety Culture Policy Statement" in the *Federal Register* (FR) in June 2011 (76 FR 34773; June 14, 2011). This policy statement outlines the Commission's expectation that all licensees maintain a positive safety culture at their facilities. After publication of the policy statement, NRR restarted an initiative to develop a common language on safety culture. NRR held a joint public workshop, December 13–14, 2011, with a panel consisting of members from the NRC, NEI, the Institute for Nuclear Power Operations (INPO), and members of the public. The purpose of this workshop was to develop a common language, using current NRC, INPO, and International Atomic Energy Agency language, for use in the NRC's ROP and INPO's assessment processes. The NRR staff continues to lead an internal working group with members from each regional office and other NRC offices to develop common language terminology (where possible) and training materials that are consistent with the Commission's Final Safety Culture Policy Statement and common language initiative. This common terminology can then be adopted for use in various programs, including the ROP. NEI and INPO also have tested a broad initiative to monitor and improve their nuclear safety culture through an industry pilot program. The NRC staff has observed these pilot applications to become familiar with the initiative and to evaluate associated tools that it could potentially use to gain ROP efficiencies.

Based on the results from the 2011 external survey, the perception of the assessment program was generally positive. Most respondents indicated that the assessment program is objective and predictable and the information contained in the assessment reports is relevant, useful, and written in plain English. Several respondents noted that assessment language could be clearer. The staff plans to address this issue in its consolidated response to the external survey.

Regulatory Impact Summary

Scope and Objectives

On December 20, 1991, the Commission issued a staff requirements memorandum directing the staff of the U.S. Nuclear Regulatory Commission (NRC) to develop a process for obtaining continual feedback from licensees and to report it to the Commission each year. The staff described the continual feedback process in SECY-92-286, "Staff's Progress on Implementing Activities Described in SECY-91-172, 'Regulatory Impact Survey Report—Final,'" dated August 18, 1992.

The feedback process requires regional management to solicit informal feedback from its licensees during routine visits to reactor sites. The managers record this feedback on forms that they forward to the Office of Nuclear Reactor Regulation (NRR) and the Office of Nuclear Security and Incident Response (NSIR). The NRC Regions, NRR, and NSIR then evaluate the concerns and take any necessary corrective actions. This process has provided licensees with frequent opportunities to comment on the NRC's regulatory impact.

This enclosure reports on feedback received from licensees during fiscal year (FY) 2011. During this period, the staff received and compiled feedback from 92 site visits to 50 reactor sites across all four NRC 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. The sections below summarize the feedback received, the staff's evaluation, and the proposed improvement actions.

Inspector Performance

Feedback

Over half of the licensees' comments related to inspector performance. This category covers a wide range of inspector practices, but it excludes issues involving communication with licensees discussed in the following section. Over 90 percent of the comments were positive with respect to the NRC's inspection staff, noting the high quality of its inspections, its technical competence, and the effective working relationship between the NRC and its licensees. Licensees described inspectors as tough but fair, professional, and focused on the issues of greatest significance. Nonetheless, several licensees had unfavorable comments about concerns or disagreements they had with the inspector's characterization of an inspection issue.

Evaluation

The staff concludes that inspectors were professional, maintained effective working relationships, and appropriately characterized licensee performance. Over 90 percent of the comments received this year were favorable. The staff reviewed the negative feedback for trends and found that each concern related to an isolated incident or a difference in professional opinion. As stipulated in Attachment 2, "Process for Appealing NRC Characterization of Inspection Findings (SDP Appeal Process)," dated June 8, 2011, to Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," dated June 2, 2011, the significance determination process (SDP) has a formal venue for a licensee to appeal the staff's final significance determination of an inspection finding. This process was invoked only once in 2011. The appeal was denied and the staff's final determination was upheld.

The NRC management continues to emphasize to the staff the importance of professional conduct. Senior NRC managers reinforce these expectations during inspector counterpart meetings, workshops, training courses, and site visits conducted in accordance with IMC 0102, "Oversight and Objectivity of Inspectors and Examiners at Reactor Facilities," dated August 22, 2005. The staff will continue to closely monitor the regulatory impact of inspector performance.

Formal Communications with Licensees

Feedback

Almost half of the licensees' comments related to the effectiveness of communications between the NRC staff and licensees. Almost all comments were favorable on communications with resident and region-based inspectors as well as regional and Headquarters staff and management. Many licensees said that communications were good or excellent, with only a single licensee noting communication concerns with an individual inspector.

Evaluation and Action

The staff concludes that communications between the NRC and its licensees are effective. The staff bases this conclusion on the large number of routine interactions between the NRC and its licensees, combined with the many favorable comments and the relatively few negative comments received during the past year. All of the comments except one received this year about NRC communications were favorable, and the reported communication problem was isolated and has been addressed.

The staff is aware of the importance of prompt and clear communication and emphasizes this goal in the policy, guidance, and training provided for inspectors and other NRC staff and management. Effective communications will remain a priority and will receive continued monitoring and attention from regional and Headquarters management.

Other Notable Comments

Feedback

As previously noted, more than 90 percent of comments were favorable, although some additional concerns were noted outside the inspector performance or formal communications areas previously discussed. For example, a few licensees raised concerns with the potential negative impacts in implementing Title 10 of the *Code of Federal Regulations* Part 26, "Fitness for Duty Programs," Subpart I, "Managing Fatigue." Two licensees also noted concerns with untimely or inconsistent decisionmaking and two others expressed concerns with the subjectivity of aspects of the SDP, including the security SDP, and the use of qualitative criteria when risk-informed tools are not adequate to provide reasonable and timely estimates of safety significance.

Evaluation and Action

The staff acknowledges these concerns and has forwarded the specific feedback to the responsible offices for their consideration.

Reactor Oversight Process Resources

Table 1 summarizes the U.S. Nuclear Regulatory Commission (NRC) staff resources expended, in hours, for the Reactor Oversight Process during the past three calendar year (CY) inspection cycles. Overall staff effort in CY 2011 increased by approximately 1 percent compared with CY 2010 for the activities listed in Table 1.

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.

Table 1 Resources Expended¹
(Inspection-Related Staff Effort Expended at Operating Power Reactors)

	<u>CY 2009 hrs²</u>	<u>CY 2010 hrs²</u>	<u>CY 2011 hrs</u>
Baseline Inspections	313,788	314,947	316,297
<i>Direct Inspection Effort</i>	155,803	156,319	156,871
<i>Inspection Prep/Doc</i>	107,462	109,550	111,194
<i>Plant Status</i>	50,523	49,078	48,232
Plant-Specific Inspections	15,454	26,229	21,670
<i>Direct Inspection Effort</i>	9,376	16,552	11,700
<i>Inspection Prep/Doc</i>	6,078	9,677	9,970
Generic Safety Issue Inspections	3,061	6,506	11,868
<i>Direct Inspection Effort</i>	1,698	3,643	6,302
<i>Inspection Prep/Doc</i>	1,363	2,863	5,566
Performance Assessment (Regional Effort Only)	11,482	10,439	10,247
Other Activities³	67,868	75,902	78,918
Total Staff Effort	411,653	434,023	439,000
Total Staff Effort/Operating Site	6,237	6,576	6,652

¹ Resources expended include regional, Office of Nuclear Reactor Regulation, and Office of Nuclear Security and Incident Response hours.

² The hours presented for CY 2009 and CY 2010 have been revised because the calculation methods and software used to query the database were updated. All hours reported reflect a consistent and defined approach to allow for an accurate year to year comparison going forward.

³ Other activities consist of inspection-related travel, the SDP, enforcement support, communications, regional support, and technical reviews

Resident Inspector Demographics

Scope and Objectives

This enclosure is the annual update on demographic data for inspectors assigned to the resident inspector (RI) program as originally requested by the Commission in its staff requirements memorandum (SRM) for COMGJD-98-001/COMEXM-98-002, "Discussion of Resident Inspector Demographics and the Balance between Expertise and Objectivity," dated April 8, 1998 (Agencywide Documents Access and Management System Accession No. ML003753515). The scope and breadth of this annual update have evolved over the years to address requests from the Commission in subsequent SRMs, recommendations from the Davis-Besse Lessons Learned Task Force (DBLLTF), and other enhancements to provide a more focused review.

The RI program demographic analyses examine three primary functional areas: inspector experience, inspector turnover, and site staffing. The results are discussed in Sections I, II, and III below and illustrated in Figures 1 through 7 at the conclusion of this enclosure. Several of the analyses separately examine data from the RI and senior resident inspector (SRI) groups while other analyses combine data from these groups into region-based or national analyses and trends. Section IV seeks to directly correlate the analyses of Sections I, II, and III, to prior agency actions to enhance relocation and retention of employees, the effectiveness of which was reviewed in SECY-11-0180, "Effectiveness Review of Actions to Enhance Relocation and Retention of Employees," dated December 21, 2011 (ADAMS ML11347A263). Finally, Section V provides conclusions.

I. Inspector Experience

In accordance with Appendix A to Inspection Manual Chapter (IMC) 0307, "Reactor Oversight Process Self-Assessment Program," dated March 23, 2009, experience analysis consists of the following four data sets:

- (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 the NRC. Examples of relevant non-NRC experience include operation, engineering, maintenance, or construction experience with commercial nuclear power plants, naval shipyards, U.S. Department of Energy facilities, or the U.S. Navy's nuclear power program.

In analyzing the following experience parameters, the staff used both mean and median values from November 2007 through November 2011. Calendar-year data were used for turnover and staffing analysis.

RI Group Experience Analysis

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 RIs (e.g., 9 of 14 RIs 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 RIs are promoted to SRI positions.

II. Inspector Turnover

The rate of RI program inspector turnover is evaluated and trended, and turnovers are categorized for the RI and SRI groups, pooled across regions. This analysis supports the identification and evaluation of agency actions to manage turnover rates. Turnovers tabulated in Figures 5 and 6 reflect those RI and SRI departures from current positions during the calendar year that were for causes listed in the respective figures. Departures for causes not specifically listed in the tables, such as RI and SRI site-to-site transfers, are not captured as turnovers. Turnover rates were calculated by dividing the total turnovers by the reported population, which was comprised of 72 RIs and 66 SRIs in 2011.

2011 RI Group Turnover

Analysis of the data summarized in Figure 5, RI Group 5-Year Turnover Trend, reveals that the rate of turnover continues to trend downward from a high of 46 percent in 2007 to 19 percent in 2011, with a 23 percent bump in 2010. Seventy-two RI group positions were tabulated for turnover analysis in 2011. Consistent with prior years, promotion to SRI dominates RI turnovers, accounting for 9 of 14. The second leading cause of RI turnover continues to be movement to non-RI positions within the NRC, accounting for 3 of 14. Finally, 2 of 14 RI turnovers were the result of resignations from the NRC, a rate that has remained constant for the last 3 years.

As a result of the high turnover in 2007 (46 percent), about half of the RIs were in new assignments, which likely contributed to the reduced turnover in the following 3 years. In addition, external forces, such as the current real estate market, have resulted in a negative incentive for turnover and have caused several SRIs and RIs to apply for extensions beyond 7 years. Finally, as discussed in SECY-11-0180, the staff has implemented a number of initiatives to enhance retention of employees, which may also have contributed to the reduction in turnover.

2011 SRI Group Turnover

Analysis of the data summarized in Figure 6, SRI Group 5-Year Turnover Trend, reveals a 5-year trend that began with a high of 26 percent in 2007, trended downward to a low of 11 percent in 2009, followed by a slightly upward trend to 12 percent in 2011. Sixty-six SRI group positions were tabulated for turnover analysis in 2011. SRI turnover in 2011 was dominated by lateral movement to non-SRI positions within the NRC, accounting for 6 of 8 SRI turnovers and promotion to higher non-SRI positions accounting for 2 of 8 SRI turnovers. Unique to 2011, the data indicates that there were no SRI resignations or retirements.

III. Permanent Site Staffing

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.

Permanent¹ inspector staffing levels at each of the reactor sites were analyzed 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

¹ 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 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.

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.

Table 1 Individual Permanent Site Staffing Performance 5-Year Trend

<i>Instances of Annual Site-Specific Staffing < 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

IV. Effectiveness Review of Actions to Enhance Relocation and Retention

Staff turnover within the NRC, whether caused by promotion, reassignment, retirement, or resignation, is an ongoing process from which the RI program is not insulated. To ensure that the RI program can continue to fulfill its mission, the Commission directed the staff in SRM M070531, "Briefing on Results of the Agency Action Review Meeting (AARM)," dated June 14, 2007, to evaluate recruitment, training, and development to confirm that there are adequate human resources to meet changing needs.

SECY-09-0050, "Actions to Enhance Relocation and Retention for Employees," dated March 30, 2009, informed the Commission of staff actions to enhance the relocation and retention of employees. The staff identified existing authorities and flexibilities that could be further developed and appropriately used to enhance the agency's relocation and retention processes. In the SRM for SECY-09-0050, dated June 26, 2009, the Commission approved the staff's proposals to use existing authorities to enhance the agency's relocation and retention processes to address the turnover in SRI and RI positions, and asked the staff to report to the Commission within 2 years on the effectiveness of these changes. In accordance with this SRM, the staff reported on the effectiveness of the relocation and retention enhancements for SRIs and RIs in SECY-11-0180, "Effectiveness Review of Actions to Enhance Relocation and Retention of Employees," dated December 21, 2011.

V. Conclusions

The staff has concluded that sites continue to be staffed with experienced RIs and SRIs. The staff largely credits the Commission's support and ongoing efforts to develop and maintain a pool of capable potential resident inspector candidates to fill anticipated and unanticipated vacancies for this continuing success.

Staff turnover rates in both the RI and SRI ranks have remained relatively stable since 2009.

Nationwide analysis confirms that staffing remains stable and well above the 90 percent staffing goal while the number of instances of individual site staffing below 90 percent remains low and stable.

The NRC initiated several actions to ensure an experienced and stable RI and SRI program, as described in SECY-09-0050. The agency recently reported on the effectiveness of these enhancements in SECY-11-0180.

The staff plans to continue to closely monitor RI and SRI demographics and site staffing in 2012.

Figure 1 RI Group Median Experience 5-Year Trend

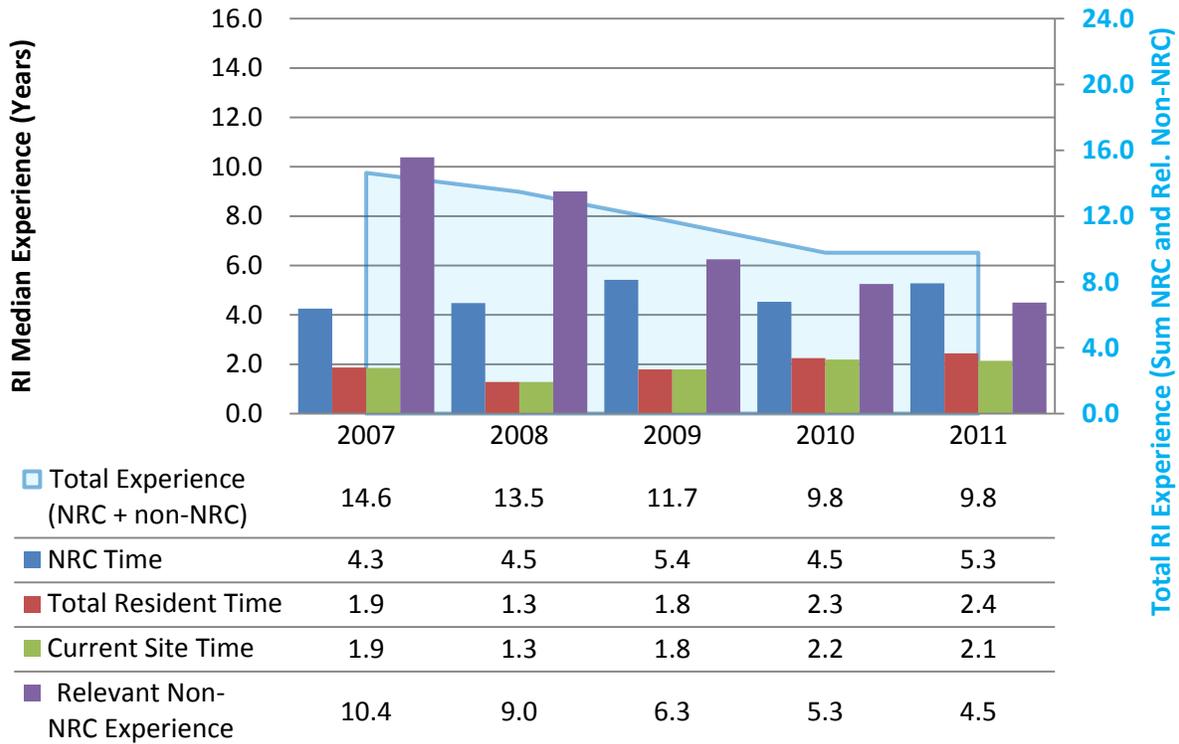


Figure 1a RI Group Mean Experience 5-Year Trend

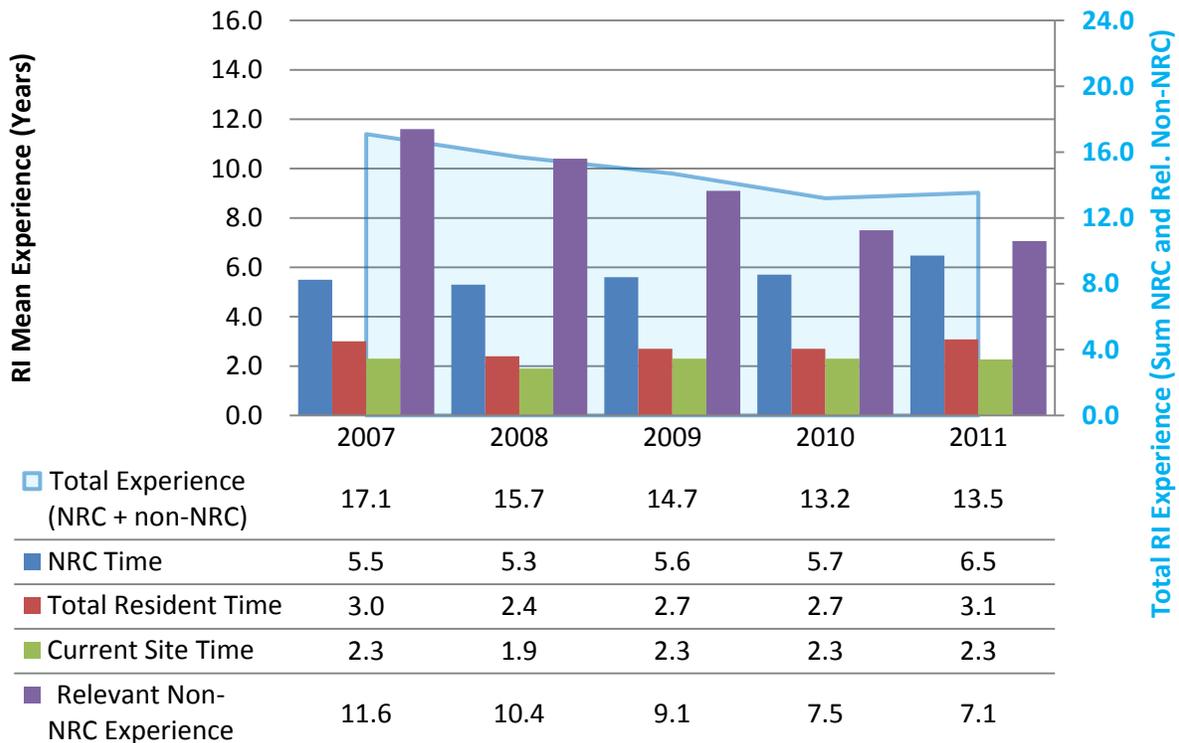


Figure 2 2011 RI Group Median Experience by Region

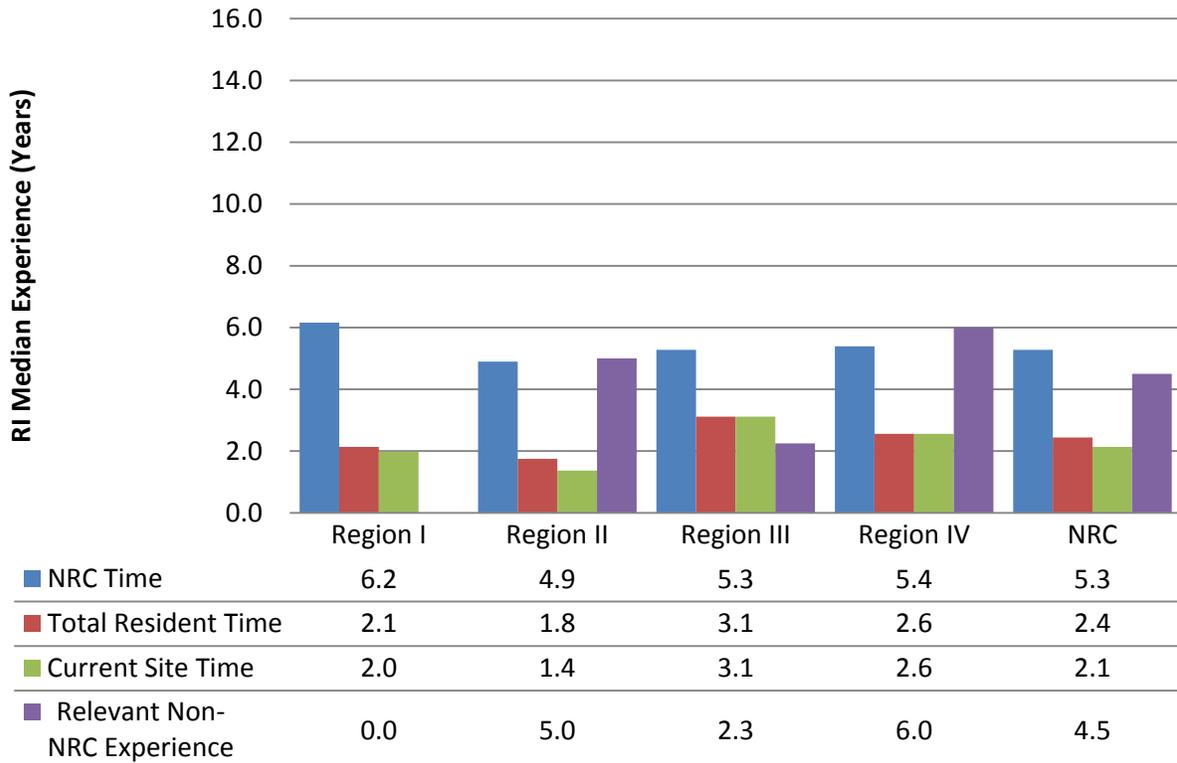


Figure 2a 2011 RI Group Mean Experience by Region

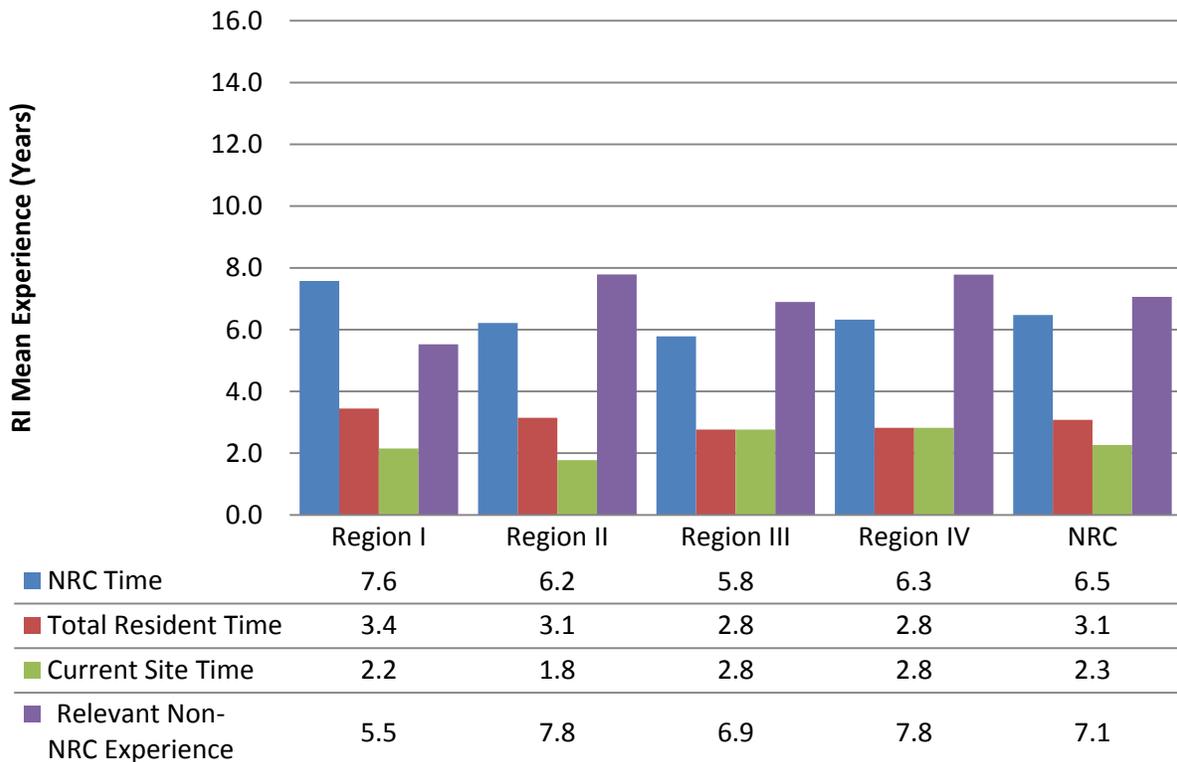


Figure 3 SRI Group Median Experience 5-Year Trend

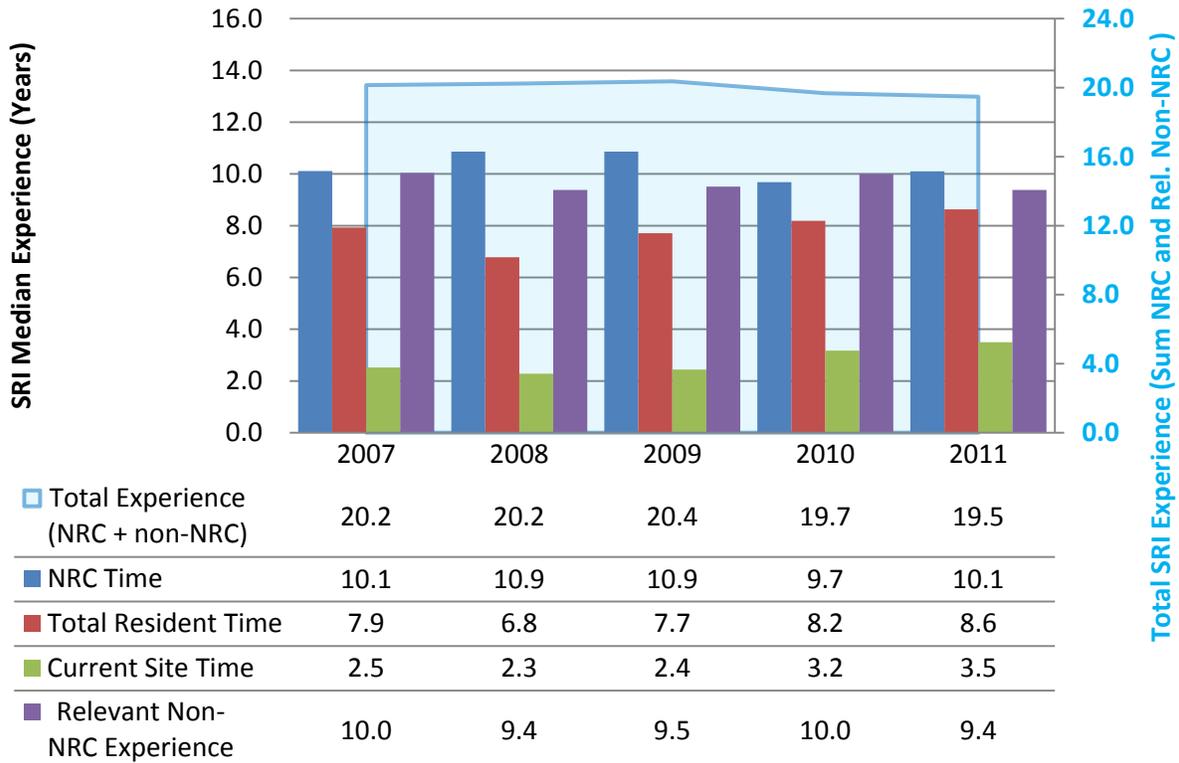


Figure 3a SRI Group Mean Experience 5-Year Trend

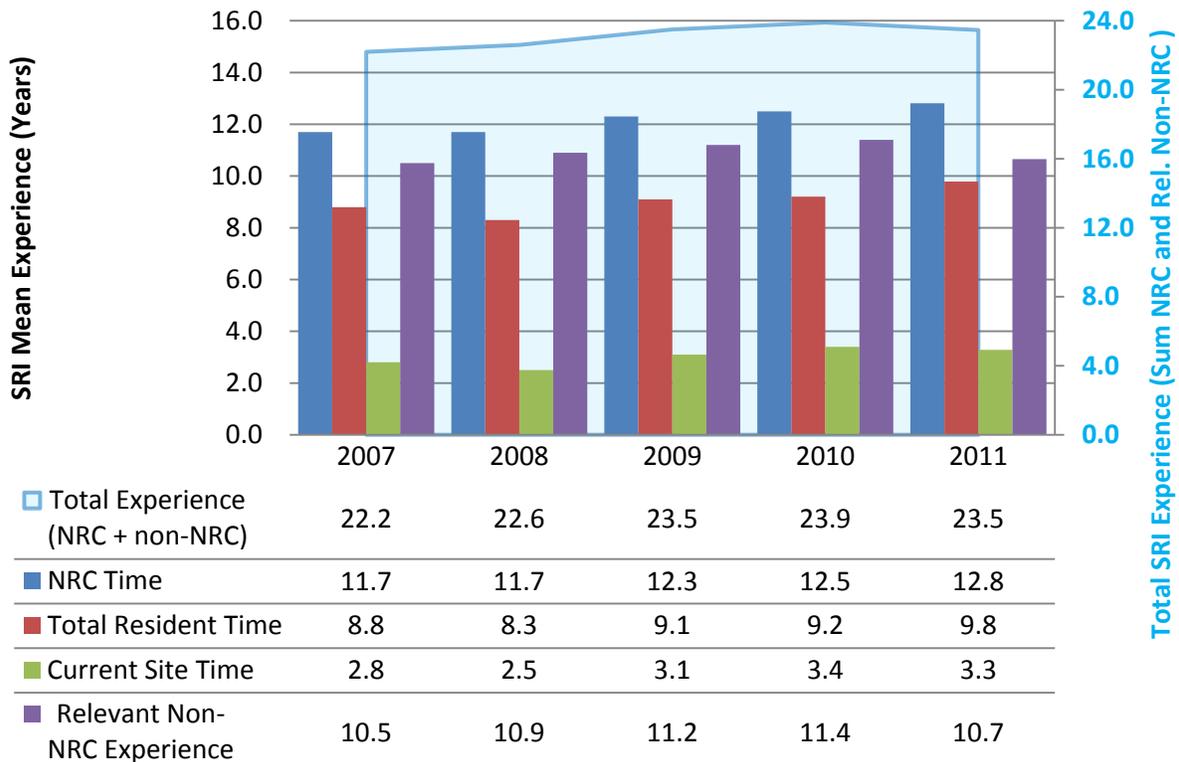


Figure 4 2011 SRI Group Median Experience by Region

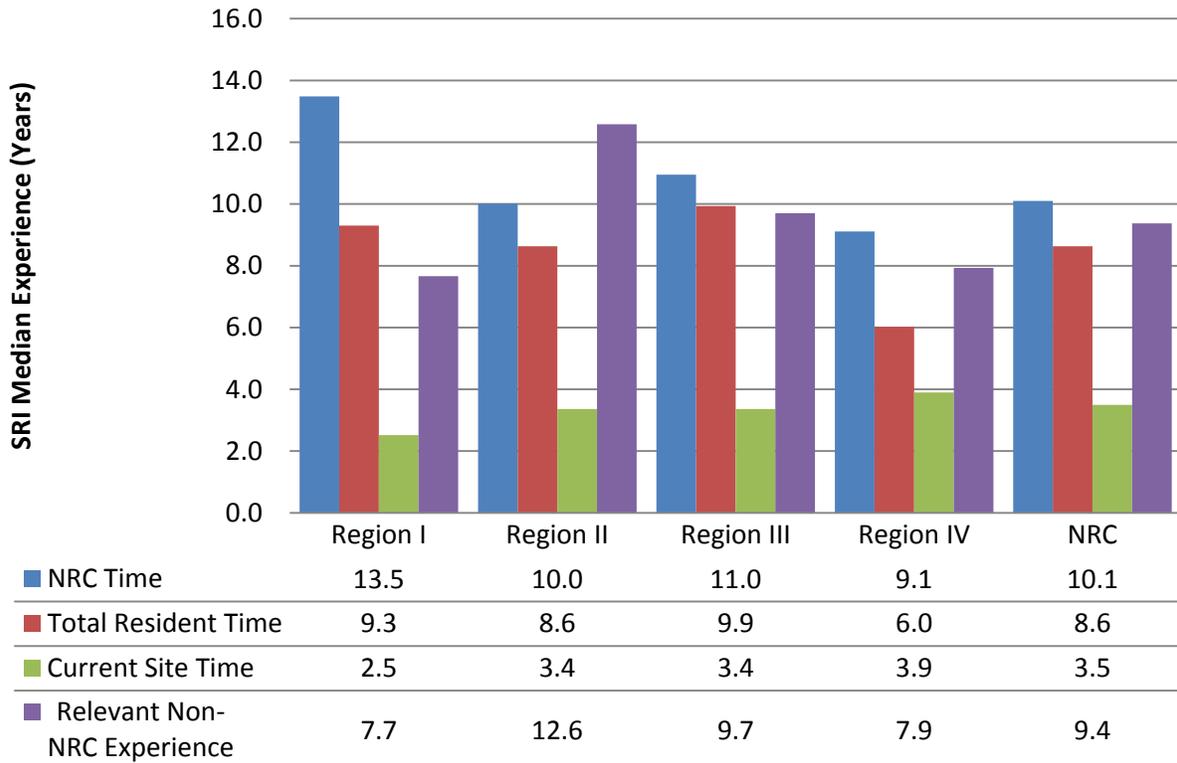


Figure 4a 2011 SRI Group Mean Experience by Region

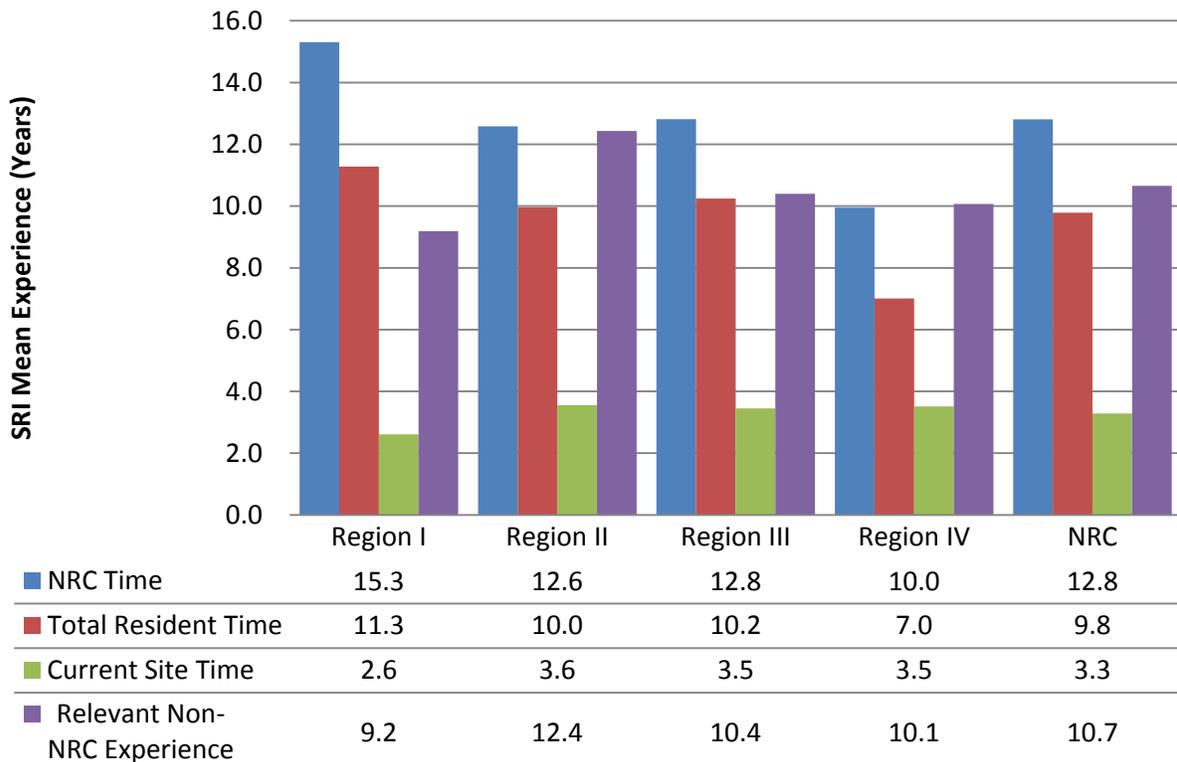


Figure 5 RI Group 5-Year Turnover Trend

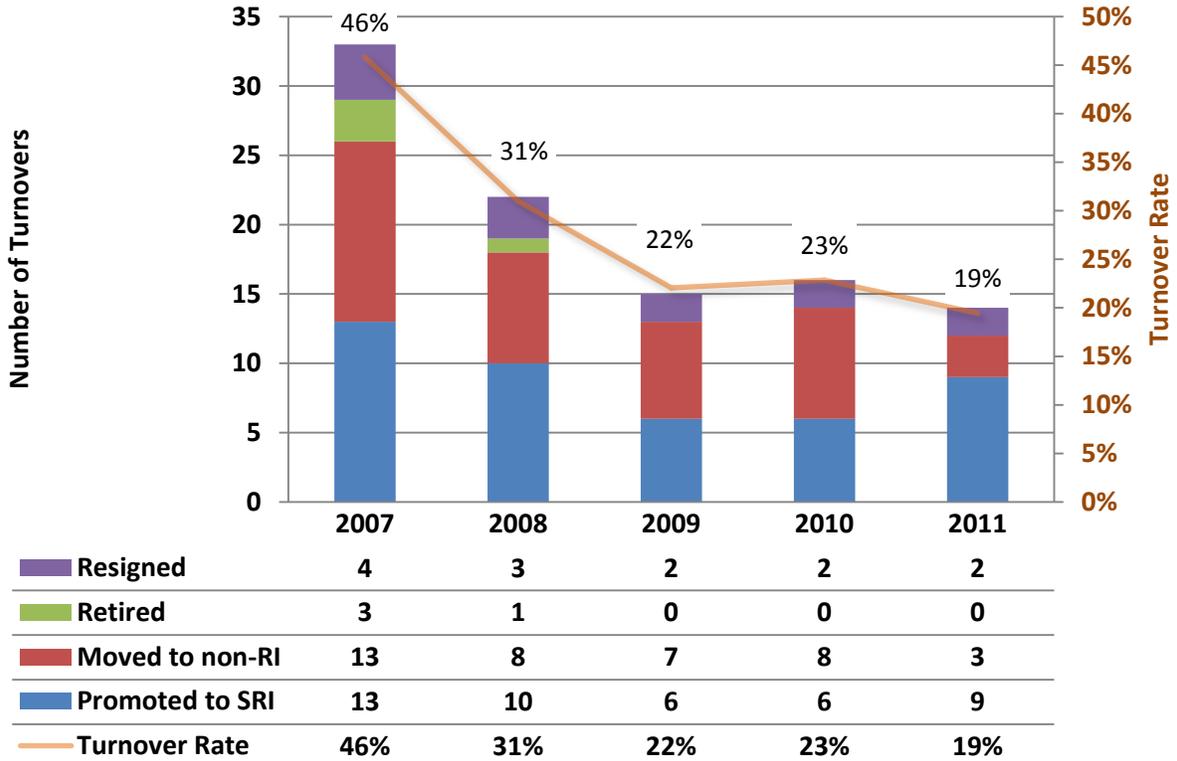


Figure 6 SRI Group 5-Year Turnover Trend

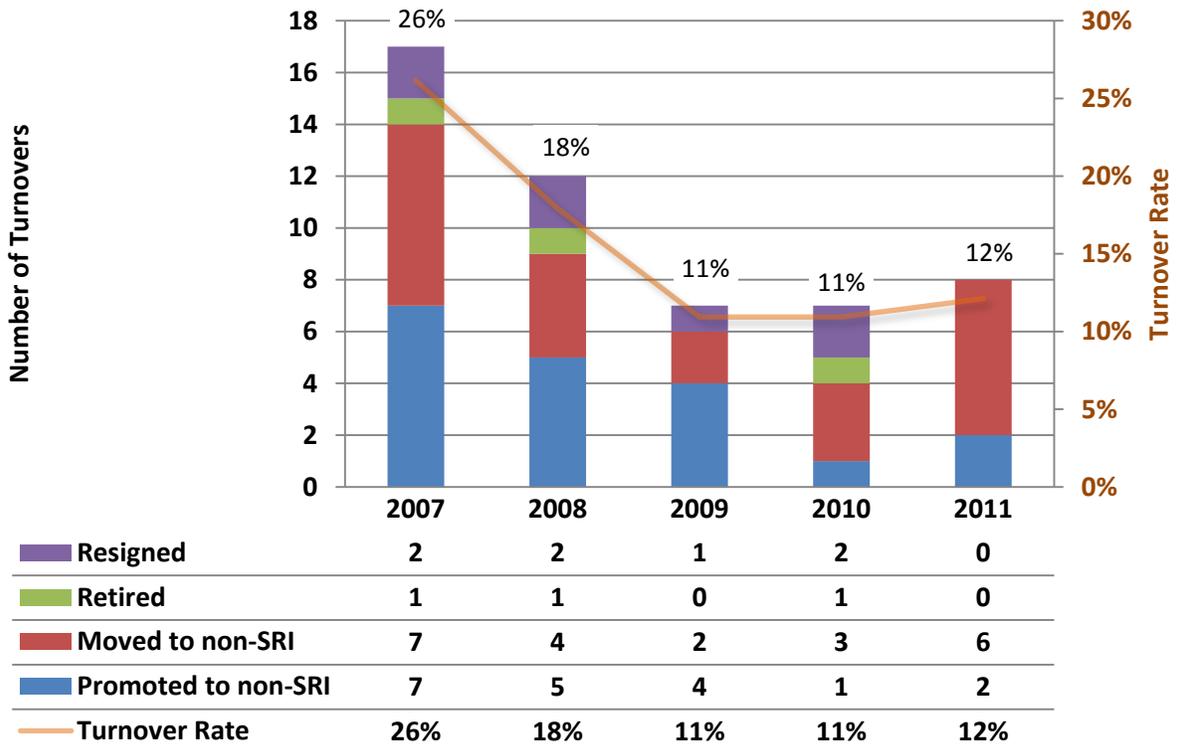


Figure 7 2011 Permanent Site Staffing Performance by Region

