MANUAL CHAPTER 0307

REACTOR OVERSIGHT PROCESS SELF-ASSESSMENT PROGRAM

0307-01 PURPOSE

The Reactor Oversight Process (ROP) is a regulatory framework that includes licensee performance indicator data, NRC inspection activity and determination of inspection finding significance, and assessment with the goals of being objective, risk-informed, understandable, and predictable. The ROP self-assessment program evaluates the overall success of the ROP in meeting these objectives as well as meeting the agency's performance goals of (1) maintaining safety, protection of the environment, and the common defense and security, (2) increasing public confidence, (3) making NRC activities and decisions more effective, efficient, and realistic, and (4) reducing unnecessary regulatory burden on stakeholders. The outcomes of the ROP include adjusting or enhancing inspection activities, communication activities such as reports and regulatory conferences, regulatory actions such as confirmatory action letters and orders, and enforcement.

As part of implementing a planning, budgeting, and performance management (PBPM) process, the agency developed program-level operating plans, which include performance measures and targets. The ROP self-assessment program is not meant to replicate or replace this activity; however, many of the ROP self-assessment program metrics are the same as or similar to measures and criteria of the PBPM.

0307-02 OBJECTIVES

02.01 To establish the processes for collecting information and data to support the ROP self-assessment program.

02.02 To establish a process for objectively evaluating the effectiveness of the ROP in achieving the goals of being objective, risk-informed, understandable, and predictable as well as the agency performance goals of maintaining safety; enhancing public confidence; increasing effectiveness, efficiency and realism of NRC activities and decisions; and reducing unnecessary regulatory burden.

02.03 To develop recommended improvements to the ROP.

02.04 To inform the Commission, NRC senior management, and the public of the results of the ROP self-assessment program, including any conclusions and resultant improvement actions.

0307-03 DEFINITIONS

03.01 Audit. A periodic examination and checking of selected records or activities to verify their correctness or compliance with predetermined standards.

03.02 Inspectable Area Lead. Person in the Division of Inspection Program Management of NRR assigned responsibility to oversee and manage the use of individual baseline inspection procedures or attachments to those procedures.

03.03 ROP Program Area Lead. Person in the Inspection Program Branch (IIPB) of NRR assigned responsibility to oversee and manage the associated programs for the major elements of the Reactor Oversight Process. The ROP elements are the performance indicator (PI) program, the inspection program, the significance determination process (SDP), and the assessment (and enforcement) process.

03.04 Survey. The analysis of information gathered through questionnaires.

0307-04 RESPONSIBILITIES AND AUTHORITIES

04.01 Director, Office of Nuclear Reactor Regulation (NRR). Oversees and manages the Reactor Oversight Process.

04.02 Director, Office of Research (RES). Provides support and data as requested by the Director, NRR.

04.03 Regional Administrators. Provide data to support the ROP self-assessment program as requested by the Director, NRR.

04.04 Director, Division of Systems Safety and Analysis (DSSA). Provides data to support the ROP self-assessment program as directed by the Director, NRR.

04.05 Director, Division of Inspection Program Management (DIPM)

a. Oversees the implementation of the ROP self-assessment program.

b. Develops policies for the ROP self-assessment program.

c. Issues the annual ROP self-assessment report.

04.06 Chief, Inspection Program Branch (IIPB)

a. Develops program guidance and procedures for the ROP self-assessment program.

b. Ensures data from all sources are collected and consolidated to facilitate analysis.

c. Recommends and implements improvements to the ROP self-assessment program.

d. Monitors the effectiveness of corrective actions and improvements to the ROP that are developed in response to self-assessment findings.

e. Issues status reports to the Deputy Regional Administrators.

f. Develops the annual ROP self-assessment report.

g. Assures the assignment of ROP program area leads in IIPB.

04.07 ROP Program Area Leads

a. Collect self-assessment data each calendar quarter for assigned program area (e.g., PI, inspection, SDP, and assessment).

b. Collect and analyze self-assessment data for the previous year, and write annual self-assessment report for assigned program area.

04.08 Inspectable Area Leads

a. Collect data and user experience for assigned inspectable areas and summarize the information for the annual self-assessment report.

b. Annually review and evaluate the regional use of assigned inspectable area procedures.

0307-05 DISCUSSION

The ROP is the NRC's primary means of assuring that commercial nuclear power plants are operated safely and in accordance with applicable regulations. It is important that the ROP be periodically evaluated and improved when necessary to ensure continued achievement of its specified goals and objectives. These goals and objectives include being objective, risk-informed, understandable, and predictable, as well as meeting the agency's performance goals of maintaining safety; increasing public confidence; improving the effectiveness, efficiency, and realism of NRC activities and decisions; and reducing unnecessary regulatory burden. The ROP consists of inspections, performance indicators, significance determination processes, assessment, and enforcement.

Periodically, the self-assessment program collects information from various sources, including the Reactor Program System (RPS), the inspection program, the ROP PI program, other industry-level indicators, periodic independent audits, stakeholder surveys, public comments, and other stakeholder interactions. Based on this information, the success of the ROP's major program areas (PIs, inspection program, significance

determination process, and assessment) is assessed. In addition, the ROP's overall effectiveness is assessed and recommendations for improvement are made.

05.01 Performance Metrics. A set of performance metrics associated with each of the program areas of the ROP was developed to assess performance with respect to the goals and objectives mentioned above. In addition, metrics of a more general nature were developed, using stakeholder feedback, to gauge overall performance of the ROP. Inspector profile metrics were also developed to provide the basis for the annual demographic report to the Commission. A detailed description of these performance metrics is contained in Appendix A. The performance metrics will be reviewed by IIPB as part of the annual ROP self-assessment process to evaluate their efficiency and effectiveness in providing a useful assessment of the ROP. Metrics may be added, deleted, or modified as necessary to provide a meaningful management tool. Industry-level performance metrics are being developed and will be described in a separate inspection manual chapter when development is completed.

05.02 Data Collection. IIPB has the overall responsibility for data collection. A variety of methods are used to collect data regarding the performance of the ROP. These methods include data from the RPS, internal and external stakeholder surveys, independent audits, responses to *Federal Register* notices, and information collected via program document reviews. In addition, RES, the regional offices, DSSA, and other DIPM branches are tasked via memorandum to provide data. To the extent possible, data collection is from agency databases and the need for ad hoc, manually developed data is minimized. Since IIPB is relying heavily on the quality of the data contained in the RPS database, it is imperative that the regions ensure the accuracy and timeliness of the RPS data. As part of the annual metric review, IIPB will evaluate the need to modify or add permanent automated systems to obtain needed metric information to minimize the burden on the staff.

With the exception of stakeholder surveys and responses to *Federal Register* notices, data are collected quarterly. Data reporting is completed within 45 calendar days of the end of the quarter under review. Internal and external stakeholder surveys or *Federal Register* notices to collect stakeholder feedback are issued at least biennially. Also, periodic equipment trending reports issued by RES are reviewed to identify additional insights into ROP performance.

a. Inspectable area leads remain cognizant of the implementation of their assigned procedures. Throughout the year, they collect feedback forms written against their assigned areas, they visit regions and sites to discuss their areas with the inspectors and regional managers, and they participate in industry meetings to gain insights into the industry's perceptions of their areas.

   At least once every two years, the inspectable area leads participate in or observe an inspection of their assigned procedures. Each year, the inspectable area leads summarize the insights gained, significant issues with, and major changes to their assigned areas in accordance with section 06.03 of this chapter. The summary is given to the ROP program area lead responsible for the inspection program in time to support the annual self-assessment report.

b. ROP program area leads remain cognizant of the implementation of their assigned programs. Throughout the year, they collect feedback forms written against their assigned areas, they visit regions and sites to discuss their areas with the inspectors and regional managers, and they participate in industry meetings to gain insights into the industry's perceptions of their areas. The program area leads collect self-assessment metric data for their areas each calendar quarter.

   At the end of each year, the ROP program area leads collect metric data and other insights into their areas and analyze the data for the previous year. The analyses form the basis for and are included in the annual self-assessment report on the ROP.

05.03 Data Analysis and Recommendation Development. IIPB has the overall responsibility for analyzing program data and developing recommended improvements to the ROP. Data analysis consists of comparing performance metric data with pre-established criteria and writing a determination of its meaning or programmatic impact. For example, criteria for acceptable ROP performance have been identified for each performance metric in Appendix A. Thus a favorable comparison of data to criteria would indicate the ROP met the process goals and objectives, and likely, no programmatic changes would be recommended. However, for an unfavorable comparison more analysis is required to determine causal factors and develop recommended process improvements.

The analysis of data also includes evaluating the feedback forms, the results of audits conducted on various aspects of the ROP, comments collected from internal and external stakeholders, and any other insights gained by inspectable area leads and ROP program area leads.

Due to their direct experience with the inspection and oversight programs gained through their implementation of the procedures, the regions should be consulted during the data analysis and recommendation development process to ensure the regional insights are incorporated into the change process.

05.04 ROP Self-Assessment Reports. There are several types of periodic ROP self-assessment reports that serve different purposes as described below:

a. Mid-cycle. Brief status reports are issued by the IIPB Branch Chief to the Deputy Regional Administrators. These reports consist of a summary of outcomes for the self-assessment performance metrics and highlight any areas of concern and recommended corrective actions. Graphical presentations of most of the performance metrics, including current data and comparison with established criteria, are also included. Note that quarterly reports may be issued as deemed necessary to address particular issues of concern resulting from the quarterly data and analysis.

b. Annual. IIPB develops an annual ROP self-assessment report to be issued before the annual Agency Action Review Meeting described in Management Directive 8.14 and IMC 0305, "Operating Reactor Assessment Program." The overall summary report must discuss any metrics that did not meet their pre-established criteria, the IIPB's analysis of the reasons for not meeting the criteria,

and any actions taken to change the program or improve its implementation. The report may briefly discuss any other significant lessons from the analyses of the metrics, even if the lesson is related to a metric that did meet its criteria. The report will also identify any metrics not counted during the previous year and the reasons for that. The annual analysis may be a separate report or may be incorporated into the Commission paper discussed in 05.04.c.

c. ROP End-of-Year Commission Paper. Annually, as directed by the Commission, IIPB writes a paper describing the self-assessment of the ROP. This paper typically includes any lessons learned from the previous year, any major changes made to the ROP, the status of issues discussed in the Commission paper from the previous year, an update on the resident inspector demographic analysis, and any other significant issues affecting the ROP. The Commission paper is written to support the Agency Action Review Meeting and the Commission briefing on plant performance that follows the review meeting.

05.05 Customized Audits of the ROP. After each annual ROP cycle, IIPB may use the insights gained from the self-assessment to develop topics for audits that delve more deeply into those aspects of the ROP that show indications of weaknesses or areas for future development. The topics may be suggested by an analysis of the metrics, an analysis of the feedback forms, audits of inspection reports, survey responses, or information gathered at counterpart meetings. IIPB develops an audit plan that tailors the audit to each region audited and identifies the attributes to be verified and associated standards. The audits can verify consistency of program implementation among the regions, very an aspect of the program over all four regions, or focus on one or two regions. The purpose of the audits is to determine if a problem exists with the program and how best to fix it if one does exist. The audits are generally conducted by IIPB staff, who may ask for assistance from other branches or the regions if a particular expertise is needed. The audits are conducted during the following ROP cycle and their results are used in the next annual ROP self-assessment.

0307-06 ANNUAL REVIEW OF BASELINE INSPECTION PROCEDURES

All of the baseline inspection program procedures are reviewed at least annually. The objectives of the review are to (1) determine if changes in scope, frequency, or level of effort are needed based on recent experience, (2) determine if a change to the estimated hours for completion is needed, (3) define or change what constitutes minimum completion of each inspectable area, if needed, and (4) critically evaluate all of the inspectable areas together to justify retaining them in the baseline inspection program, or determine if the addition of a new inspectable area is warranted.

06.01 Content Review. The inspectable area leads will collect information on the use of each inspection procedure to which they are assigned, analyze the data, and make recommendations for changes to the scope (breadth of inspection), frequency of inspection, or level of effort (depth and number of samples).

a. Data Sources. The data to collect and analyze include (but are not limited to) the following:

1. Feedback forms received during the year for each procedure.

2. Experience gained during the year and reported to NRR through counterpart meetings, phone calls, and other venues.

3. Insights gained from reviewing inspection reports for scope of inspections and nature of and basis for findings.

4. Plant and/or regional visits to obtain direct feedback and insights regarding the implementation of individual procedures.

5. Reports of RPS data on hours used and number, type, and significance of findings.

6 Basis document discussions of the scope of and reasons for the inspectable areas.

7. Participation in or observation of inspections.

8. Metric data for the inspection program.

b. Review Factors. In evaluating the scope, frequency, and level of effort for an inspectable area, each of the following factors will be considered as a potential indicator that could provide meaningful insights into the evaluation. All the factors need to be assessed in concert with each other; no one factor should dominate the evaluation.

1. Consistency with original basis. Determine if the scope of inspection (the type of things the inspectable area encompasses) is consistent with the original framework as specified in the ROP basis document. Determine if there's been any change to how the cornerstone's attributes are being measured, i.e., a new PI has been added to the ROP or an existing PI was significantly changed or deleted from the ROP.

2. Risk or safety significance. Relative priority to other inspectable areas (from basis document and estimated hours and frequency of inspection), and consequence of problems if area is not inspected. Although the baseline inspection program is risk-informed, there may be compelling reasons (e.g., public confidence) other than direct effects on risk for inspecting an area. Those reasons are to be clearly articulated.

3. Number and significance of previous findings. One measure of the importance of an inspectable area is the number and significance of the inspection findings in the area.

4. Findings per hour index. (Number of findings/ number of direct inspection hours)*1000. A comparison of each inspectable area's index to the baseline inspection program's overall index could indicate the relative effectiveness of the inspections.

5. Feedback. The specific responses and general trends from the inspectors' feedback or other sources could indicate needed changes to scope, frequency, or level of effort.

6. Timeliness of Identification. For findings greater than green, evaluate any delays or inefficiencies in identification of performance deficiencies and make recommendations to improve inspection effectiveness.

06.02 Resource Estimate Review. The inspectable area leads will collect and analyze resource usage data for each procedure to which they are assigned and make recommendations for changes to the nominal resource estimate.

a. Data Sources. The data to collect and analyze include the following:

1. Various RPS reports on procedure usage showing minimum hours, maximum hours, regional averages, and inspection report numbers.

2. Individual inspection reports to review number of inspectors and scope of inspection.

3. Insights from regional counterparts on scope of inspection and hours charged.

b. Review Factors. The following aspects of each baseline procedure should be considered in evaluating the nominal resource estimates:

1. Changes in the inspectable area. Any changes to scope, frequency, or level of effort from the previous content review factors.

2. Actual usage. Comparisons of regional data on the minimum, maximum, and average hours used for each inspectable area. Outliers need to be researched to determine if the full scope of the procedure was inspected or if the inspection went beyond the procedure's scope. If the outliers resulted from inspections below or beyond the procedure's requirements, then their hours should not be included in determining the average number. Outliers are inspections whose charged effort is 50 percent below or above the current average.

3. Number of units. Carefully examine the differences in usage between single, dual, and triple-unit sites to determine if such differences should be reflected in the nominal estimate for each procedure.

4. Regional perspectives. Discuss any proposed changes with the regions and consider their perspectives and analyses before making a final determination on changes to the nominal estimates.

06.03 Documentation. The inspectable area leads document their analysis of each of the procedures to which they are assigned. The following sections should be included in each written analysis:

1. Analysis of procedure objectives. Determine if the scope has remained consistent with the original basis and whether there have been any changes to how the cornerstone's attributes are being measured (i.e., changes to the performance indicator or inspection program). Assess any potential changes that may affect the risk-significance or relative importance of the procedure's objectives.

2. Review of inspection results. Determine the number of green and greater than green findings attributed to the procedure(from the RPS dynamic Web page). Summarize each greater than green finding, including a description of how the issue was identified (by licensee, NRC, or self-revealing), the results of the supplemental inspection, and an evaluation of any unnecessary delays or inefficiencies in identifying the performance deficiencies.

3. Review of resource expenditures. Determine the number of hours charged to the procedure by each site (from the RPS dynamic Web page). For any outliers whose charged effort is 50 percent below or above the calculated average, determine if the full scope of the procedure was inspected or if the inspection went beyond the procedure's scope. List all instances where the inspection scope was considered an outlier. Calculate the average hours charged nationwide and by each region, disregarding any outliers determined to be out of scope. Discuss any significant deviations between the regional averages and the apparent causes of the deviations. Note that some deviations should be expected due to the number of plants in each region and/or that a specific procedure may have been implemented more frequently at one plant versus another.

4. Findings per hour index. Calculate the findings per hour index and compare to the index from the previous year(s) to identify any potential trends.

5. Summary of feedback received. Summarize all feedback received over the year relative to the procedure from various venues, including feedback forms, conferences/meetings, inspection report reviews, site visits, and others.

6. Discussion of procedure revisions. Summarize significant changes made during the review period, and provide the justification for making those changes and for not making other recommended changes. The reasons should be supported with specific examples.

7. Assessment summary and recommendations. Based upon the above information, perform an assessment of the procedures' effectiveness and whether it is meeting the stated objectives. Included in this section should be any recommendations to revise the content of the procedure, the estimate hours, frequency, combination with other procedures, or other procedure improvements.

8. Planned assessment activities. Provide a brief description of specific planned activities in the coming year to monitor and assess effectiveness. Examples include participation in inspection, industry meetings, report review, etc.. This plan should be revised as necessary during the coming year.

The written analysis is sent to the ROP area lead responsible for the inspection program and is used to explain the decisions to the regions and to update the ROP basis document. This written analysis also forms the foundation for the annual review of inspection procedures to be included in the annual ROP Commission paper.

After recommended changes have been discussed with the regions, the inspectable area leads process revisions to their procedures in accordance with IMC 0040, “Preparing, Revising, and Issuing Documents for the NRC Inspection Manual.”

END

Appendix A, Reactor Oversight Process Self-Assessment Metrics

APPENDIX A
Reactor Oversight Process Self-Assessment Metrics

I. PERFORMANCE INDICATOR PROGRAM METRICS

PI-1 Consistent Results Given Same Guidance

Definition: Independently verify PIs using Inspection Procedure (IP) 71151, "PI Verification." Count all PIs that cross a threshold because of discrepancies as noted in the resultant inspection report. Licensees are requested per Nuclear Energy Institute (NEI) 99-02 to report changes to PI colors as soon as practical upon discovery via a "mid-quarter" report and to annotate in the comments field an explanation for the change.

Criteria: Use the first year of data as a benchmark for future comparison and to establish acceptable range of variability.

Lead: Regions, IIPB

PI-2 Questions Regarding Interpretation of PI Guidance

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

Criteria: Expect low numbers (but not as low as metric PI-1), with a stable or decreasing trend.

Lead: IIPB

PI-3 Timely Indication of Declining Safety Performance

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

Criteria: Expect low numbers (near zero).

Lead: IIPB

PI-4 Minimize Potential for Licensee Actions Taken in Response to the Performance Indicator Program That Adversely Impact Plant Safety

Definition: Survey stakeholders regarding PIs driving undesirable decisions. This question will be included in the overall *Federal Register* notice.

Criteria: Expect low numbers of unintended consequences reported, with a stable or decreasing trend.

Lead: IIPB

PI-5 Timely PI Data Reporting

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 a low number (near zero) of late PI submittals and postings on the NRC's external Web site.

Lead: IIPB

PI-6 Stakeholders Perceive Appropriate Overlap of PIs and Inspection Program

Definition: Survey stakeholders' perceptions of overlap between PIs and the Inspection Program. This question will be included in the survey for internal stakeholders and the *Federal Register* notice for external stakeholders.

Criteria: Expect a low number of negative comments, with a stable or declining trend in the number of negative comments received.

Lead: IIPB

PI-7 Reporting Conflict Reduction

Definition: Survey licensees and other external stakeholders regarding the perceived overlap between reporting requirements, such as those promulgated by Institute of Nuclear Power Operations (INPO), the World Association of Nuclear Operators (WANO), and the Maintenance Rule. This question will be included in the *Federal Register* notice.

Criteria: Expect a low number of negative comments, with a stable or declining trend in the number of negative comments received.

Lead: IIPB

PI-8 Clarity of PI Guidance - NEI-99-02

Definition: Survey external stakeholders' perceptions regarding the clarity of the guidance contained in NEI 99-02. This question will be included in the *Federal Register* notice.

Criteria: Expect a low number of negative comments or examples of interpretation issues, with a stable or declining trend in the number of negative comments received.

Lead: IIPB

II. INSPECTION PROGRAM METRICS

IP-1 Percentage of Inspection Findings Documented In Accordance With Requirements

Definition: Audit inspection reports in relation to program requirements (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. Each year, audit one resident/integrated report from each plant, 25 percent of all other baseline reports, and all reports resulting from inspections beyond the baseline program.

Criteria: Expect an improving trend in the percentage of findings documented in accordance with program requirements.

Lead: IIPB

IP-2 Number of Baseline Inspection Procedures Significantly Changed

Definition: Review all issued changes to baseline inspection procedures and count those procedures whose scope or frequency of inspection changed, and count new inspectable areas that relate to risk-informing the inspection.

Criteria: Expect relatively few significant changes, with a stable or declining trend.

Lead: IIPB

IP-3 Number of Feedback Forms per Document

Definition: Count the number of feedback forms received for each program document each quarter. Use a histogram to chart the number of documents for which feedback forms were received. Highlight those documents against which the most forms are written.

Criteria: Expect a decreasing trend in the number of feedback forms received for program documents.

Lead: IIPB

IP-4 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.”

Lead: IIPB, Regions

IP-5 Inspection Reports Are Timely

Definition: Obtain RPS data on the total number of reports issued and the number issued within timeliness goals (Timeliness goals are defined in IMC 0612, “Power Reactor Inspection Reports”).

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

NOTE: For inspections not conducted by a resident inspector, inspection completion is normally defined as the day of the exit meeting. For resident inspector and integrated inspection reports, inspection completion is normally defined as the last day covered by the inspection report.

Lead: IIPB, Regions

IP-6 Temporary Instructions (TIs) Are Completed Timely

Definition: Audit the time to complete TIs by region. Compare the completion status in RPS to TI requirements. Report by region the number of TIs closed within goals.

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

Lead: IIPB

IP-7 Public Communication Is Timely

Definition: IIPB posts inspection reports to the NRC's external (public) Web site within ROP timeliness goals using electronic version of inspection reports entered into the Agency Document Access and Management System (ADAMS) by the regions. IIPB also posts entries from the Plant Issues Matrix (PIM) to the NRC's public Web site using data entered into RPS by the regions. In addition, IIPB records the number of inspection reports not available in ADAMS and the number of PIM entries not updated in RPS, as well as the number of inspection reports and PIMs that are not posted to the NRC's public Web site within goals.

Within 5 weeks of the end of each quarter, IIPB posts issued inspection reports from the previous quarter, using the electronic version in ADAMS, and the associated PIM entries from RPS to the NRC's public Web site. Within 9 weeks of the end of each quarter, IIPB posts additional inspection reports and PIM entries for those not yet issued by the 5-week posting to include all findings from the previous quarter.

Criteria: Expect few untimely postings of PIMs or inspection reports, with a stable or declining trend.

Lead: IIPB

IP-8 Public Communication Is Accurate

Definition: Each calendar quarter, sample information on the NRC's external (public) Web site and count the number of times and reasons for regions changing PIMs or inspection reports (i.e., inaccuracy, new information).

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

Lead: IIPB, Regions

IP-9 Analysis of Inspection Hours

Definition: Collect and analyze RPS data (number of samples, regular hours, overtime hours) for each inspection procedure (including Plant Status). Collect preparation and documentation time.

Criteria:
(1) Expect no significant deviations (less than20% per procedure across all plants in region), and explore reasons for such deviations.
(2) Track and trend overtime for the baseline inspection program and the underlying reasons, and use first year data to establish a baseline.
(3) Track and trend preparation, documentation, travel, and communication times to establish a baseline, and assess the effects on budgeted resources.

Lead: IIPB

IP-10 Survey of ROP Users

Definition: Survey inspectors and other NRC personnel implementing the ROP, asking whether the inspection program covers areas that are important to safety.

Criteria: Trend average level of agreement.

Lead: IIPB

IP-11 Survey of Inspection Report Usefulness

Definition: Survey external stakeholders, asking about the usefulness of inspection reports. This question will be included in the *Federal Register* notice.

Criteria: Trend average level of agreement.

Lead: IIPB

III. SIGNIFICANCE DETERMINATION PROCESS METRICS

SDP-1 The SDP Results Are Predictable and Repeatable and Focus Stakeholder Attention on Significant Safety Issues

Definition: Quarterly audit of a representative sample of reported inspection findings against the standard criteria set forth in IMC0609, "Significance Determination Process." Findings should contain adequate detail to enable an independent auditor to trace through the available documentation and reach the same significance color characterization.

Criteria: The target goal is at least 90% are determined to be predictable and repeatable. Any SDP outcomes determined to be non-conservative will be evaluated and appropriate programmatic changes will be implemented.

Lead: RES for greater than green; DSSA/SPSB (reactor); DIPM/IOLB (non-reactor)

SDP-2 SDP Outcome Is Risk-Informed and Accepted by Stakeholders

Definition: Track the total number of appeals of final SDP results reported quarterly by the regions.

Criteria: Expect zero appeals of SDP significance that result in a final determination being overturned across all regions.

Lead: Regions, IIPB

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

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

Criteria: Expect either a stable or an increasingly positive perception of the SDP process over time.

Lead: IIPB

SDP-4 **SDP Tools for Evaluating Inspection Findings Reflect Current Plant Design and Licensee Operating Practices**

Definition: Monitor substantive revisions made to the risk-informed inspection notebooks due to non-conservative technical flaws by tracking the number of phase 2 inspection notebooks that are issued for use and subsequently withdrawn following onsite benchmarking activities.

Criteria: The target goal is zero notebook retractions due to non-conservative technical flaws.

Lead: IIPB

SDP-5 **Results of the Same Color Are Perceived by the Public to Translate to the Same Level of Significance for All Cornerstones**

Definition: Publish a *Federal Register* notice to survey external stakeholders using specific questions asking for examples of where the SDP-determined significance of findings does not appear to be consistent across ROP cornerstones.

Criteria: Expect stable or increasingly positive perception of the SDP over time.

Lead: IIPB

SDP-6 **The Resources (Direct Charges and Support Activities) Expended Are appropriate**

Definition: Track the percentage of total inspection resource expenditures attributed to SDP activities. Calculate the effort expended by the regions in completing SDP evaluations as a percentage of the total regional direct inspection effort. Use RPS codes for SDP processing activities.

Criteria: Total SDP expenditures should not exceed 10 percent of the total regional direct inspection effort (DIE) with a stable or decreasing trend.

Lead: IIPB

SDP-7 **Appropriateness of Regulatory Impact From the SDP**

Definition: Monitor the trend of regulatory impact forms that are critical of the SDP and assessment processes.

Criteria: Expect a stable or decreasing trend.

Lead: IIPB

SDP-8 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 date the item was formally transmitted to an NRR technical branch for SDP assistance, or
(3) the item was otherwise documented in an inspection report as an unresolved item pending completion of a significance determination and not counted in either of the above categories.

Criteria: In FY 2003, at least 75% of all SDP results that are counted per the criteria above should be finalized within 90 days, increasing 5% per year to 90% in FY 2006.All issues greater than 90 days will be assessed to determine causal factors and to recommend process improvements.

Lead: IIPB

SDP-9 SDP Results Are Communicated Accurately to the Public.

Definition: Each calendar quarter, track the number of inspection findings that are inaccurately communicated to the public (color of findings is inaccurately reported), by auditing the inspection findings summary information available on the NRC Web. The detailed review will include item type, significance characterization, enforcement action status, and text descriptions of greater-than-green inspection findings prior to release to external stakeholders.

Criteria: The target goal is zero inaccuracies. All inaccuracies must be addressed.

Lead: IIPB

IV, ASSESSMENT PROGRAM METRICS

AS-1 Subjective Judgment Is Minimized and Is Not a Central Feature of the Process. Actions Are Determined by Quantifiable Assessment Inputs (Examine PIs and SDP Results)

Definition: Audit all assessment-related letters and count the number of deviations from the Action Matrix.

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

Lead: IIPB

AS-2 The Program Is Well-defined Enough to Be Consistently Implemented

Definition: Audit all assessment letters and count the number of significant departures from the requirements in IMCs 0305, "Operating Reactor Assessment Program," and 0350, "Oversight of Operating Reactor Facilities in an Extended Shutdown as a Result of Significant Performance Problems." Timeliness goals are counted in metric AS-5.

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

Lead: IIPB

AS-3 Actions Taken Are Commensurate With the Risk of the Issue and Overall Plant Risk

Definition: Review actions taken for greater-than-green inspection findings and PIs. Track the number of actions (or lack of actions) taken by the regions that are not appropriate for the significance of the issues and are not consistent with the Action Matrix.

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

Lead: IIPB

AS-4 The Number And Scope of Additional Actions Recommended as a Result of the Agency Action Review Meeting (AARM) Beyond Those Actions Already Taken Are Limited

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

Criteria: The AARM should recommend few additional actions, with a stable or declining trend.

Lead: IIPB

AS-5 Assessment Program Results (Assessment Reviews, Assessment Letters and Public Meetings) Are Completed in a Timely Manner

Definition: Track the number of instances in which timeliness goals established in IMC 0305 were not met. The regions will collect timeliness data for the conduct of quarterly reviews (within 5 weeks of the end of quarter); mid-cycle and end-of-cycle reviews (within 6 weeks of the end of quarter); issuance of assessment letters (within 2 weeks of the quarterly review and 3 weeks of the mid-cycle and end-of-cycle reviews); assessment followup letters (on or before the next quarterly review); and public meetings (within 16 weeks of the end of the assessment period).

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

Lead: Regions, IIPB

AS-6 The Web Posting and Availability Via ADAMS of Assessment Letters Is Timely

Definition: Review the posting of letters to the NRC's external Web site and availability in ADAMS and compare to the timeliness goals. Record the number of letters not available in ADAMS and number of letters not posted to the Web site within goals.

Criteria: IIPB posts assessment letters to the NRC's external Web site using the electronic version in ADAMS within 10 weeks of the end of mid-cycle and end-of-cycle assessment periods and within 8 weeks of the end of intervening quarters.

Lead: IIPB

AS-7 Assessment Program Procedures Are Stable Enough To Be Perceived as Predictable

Definition: Count the number of revisions to IMCs 0305 and 0350.

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

Lead: IIPB

AS-8 The NRC's Response to Performance Issues Is Timely

Definition: Count the number of days between issuance of an assessment letter discussing an issue of 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.

Lead: Regions, IIPB

AS-9 The Agency Takes Appropriate Actions To Address Performance Issues for Licensees Outside of the Licensee Response Column of the Action Matrix

Definition: Solicit feedback on the appropriateness of regulatory attention given to licensees with performance problems via a survey question to both internal and external stakeholders.

Criteria: Expect stable or improved perception.

Lead: IIPB

AS-10 Information Contained in Assessment Reports Is Relevant, Useful, and Written in Plain Language

Definition: Perform surveys to determine internal and external stakeholder views on assessment reports.

Criteria: Expect stable or improved perception of the relevance, usefulness, and understandability of assessment reports.

Lead: IIPB

AS-11 Degradations in Plant Performance, as Measured in the Action Matrix, 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.

Lead: IIPB

V. OVERALL ROP METRICS

O-1 Public Perceives the ROP To Be Predictable and Objective

Definition: Survey external stakeholders through a *Federal Register* notice asking if decisions are overly reliant on judgement, or not controlled by the process.

Criteria: Expect a stable or increasing positive perception over time.

Lead: IIPB

O-2 NRC Perceives the ROP To Be Predictable and Objective

Definition: Survey internal stakeholders asking if decisions are overly reliant on judgement, or not controlled by the process.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-3 Public Perceives the ROP To Be Risk-informed

Definition: Survey external stakeholders through a *Federal Register* notice asking if ROP actions and outcomes are appropriately graded according to the significance of the issues at the plants.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-4 NRC Perceives the ROP To Be Risk Informed

Definition: Survey internal stakeholders asking if ROP actions and outcomes are appropriately graded according to the significance of the issues at the plants. Report survey results by strategic performance area.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-5 Public Perceives the ROP To Be Understandable

Definition: Survey external stakeholders through a *Federal Register* notice asking if they understand the process, procedures, and outputs, and if products are clear and written in plain English.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-6 NRC Perceives the ROP To Be Understandable

Definition: Survey internal stakeholders asking if they understand the process, procedures, and outputs, and if products are clear and written in plain English.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-7 Public Perceives That the ROP Maintains Safety

Definition: Survey external stakeholders through a *Federal Register* notice asking if the ROP adequately assures that plants are being safely operated and maintained.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-8 NRC Perceives That the ROP Maintains Safety.

Definition: Survey internal stakeholders.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-9 Analysis of 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. AITs will be reviewed by IIPB to identify any weaknesses.

Criteria: Expect no major programmatic voids.

Lead: IIPB

O-10 Analysis of Significant Events

Definition: Annually review all accident sequence precursor (ASP) events that have a risk significance of more than 10^{-6} to identify any ROP programmatic voids (i.e., did the baseline inspection program inspect this area? did the SDP accurately characterize resultant findings?).

Criteria: Expect no major programmatic voids.

Lead: IIPB

O-11 Public Perceives the ROP To Be Effective, Efficient, and Realistic

Definition: Survey external stakeholders through a *Federal Register* notice asking specific questions (based on NRC Strategic Plan) regarding whether the ROP is effective, efficient, and realistic.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-12 NRC Perceives the ROP To Be Effective, Efficient, and Realistic

Definition: Survey internal stakeholders asking specific questions (based on NRC Strategic Plan) regarding whether the ROP is effective, efficient, and realistic..

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

Lead: IIPB

O-13 Public Perceives That the ROP Enhances Public Confidence

Definition: Survey external stakeholders through a *Federal Register* notice asking if the ROP enhances public confidence.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-14 Opportunities for Public Participation in the Process

Definition: Survey external stakeholders through a *Federal Register* notice asking if there are sufficient opportunities for the public to participate in the process.

Criteria: Expect positive responses or an improving trend.

Lead: IIPB

O-15 Public Perceives the NRC To Be Responsive to its Inputs and Comments

Definition: Survey external stakeholders through a *Federal Register* notice asking if the NRC is responsive to the public's inputs and comments.

Criteria: Expect positive responses or an improving trend.
Lead: IIPB

O-16 Public Perceives That the ROP Is Implemented as Defined

Definition: Survey external stakeholders through a *Federal Register* notice asking if the ROP has been implemented as designed.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-17 Public Perceives That the ROP Reduces Unnecessary Regulatory Burden

Definition: Survey external stakeholders through a *Federal Register* notice asking if the ROP reduces unnecessary regulatory burden.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

O-18 Public Perceives That the ROP Does Not Result in Unintended Consequences

Definition: Survey external stakeholders through a *Federal Register* notice asking if the ROP results in unintended consequences.

Criteria: Expect stable or increasingly positive perception over time.

Lead: IIPB

VI. INSPECTOR PROFILE METRICS

PR-1 NRC Time for Resident Inspectors

Definition: Annually, report total number of years that each resident inspector has spent as an NRC employee. NRC time indicates the regulatory experience of the resident and senior resident inspector groups. IIPB, with regional assistance, will provide reasons for any meaningful increase or decrease in the NRC time metric.

Criteria: None; trend only.

Lead: IIPB with assistance from HQ and regional HR staff

PR-2 Total Time as Resident Inspector

Definition: Annually, report the total number of years the individual has spent in the resident inspector (RI) program. Total resident time indicates the experience level of the resident and senior resident inspector groups in the RI program.

IIPB, with regional assistance, will provide reasons for any meaningful increase or decrease in the total resident time.

Criteria: None; trend only.

Lead: IIPB with assistance from HQ and regional HR staff

PR-3 Qualified Total Resident Time

Definition: Annually, report the time the individuals worked as a resident or senior resident inspector after completing the resident/operations inspector qualification requirements of NRC IMC 1245, "Inspector Qualification Program for the Office of Nuclear Reactor Regulation Inspection Program." Qualified total resident time gives indication of the experience level of the resident and senior resident inspector groups who are qualified as resident/operations inspectors. IIPB, with regional assistance, will provide reasons for any meaningful increase or decrease in the qualified total resident time.

Criteria: None; trend only.

Lead: IIPB with assistance from HQ and regional HR staff

PR-4 Resident Inspector's Current Site Time

Definition: Annually, report the total number of years spent as a resident inspector at the current site for each resident and senior resident inspector. Current site time for the resident and senior resident inspector groups is the current average tour length of the resident inspector groups. IIPB, with regional assistance, will provide reasons for any meaningful increase or decrease in the current site time.

Criteria: None; trend only.

Lead: IIPB with assistance from HQ and regional HR staff

PR-5 Relevant Non-NRC Experience of Resident Inspectors

Definition: Annually, report total relevant non-NRC experience acquired by each resident inspector before joining the NRC. Examples of relevant non-NRC experience are operation, engineering, maintenance, or construction experience with commercial nuclear power plants, Naval shipyards, Department of Energy facilities, or the Navy nuclear power program. Relevant non-NRC experience indicates the agency's ability to successfully attract and retain experienced individuals in the resident inspector program.

IIPB, with regional assistance, will provide reasons for any meaningful increase or decrease in the relevant non-NRC experience value.

Criteria: None; trend only.

Lead: IIPB with assistance from HQ and regional HR staff

PR-6 Site Coverage Ratio

Definition: Semiannually, calculate the following ratio. Regions provide the total number of days during which sites received no resident inspector coverage. Coverage by qualified region-based inspectors is permitted to meet the requirements of MC 2515, but the goal here is to evaluate the ability to provide resident inspector site coverage at multi-unit sites as a result of the "N" resident staffing policy. Provide explanation for any substantial increase or decrease in the site coverage ratio.

Single-unit Sites:

Number of working days (total for all single-unit sites in the region)
during which the site received no resident inspector coverage
(i.e., both the resident and senior resident inspectors were absent)
[(26 weeks)(5 days/week) = 130 days][# of single-unit sites]

Multi-unit Sites:

Number of working days (total for all multi-unit sites in the region)
during which the site received no resident inspector coverage
(i.e., both the resident and senior resident inspectors were absent)
[(26 weeks)(5 days/week) = 130 days][# of multi-unit sites]

Criteria: None; trend only.

Lead: Regions, IIPB

PR-7 Non-IMC 1245 Training Time Ratio for Resident and Senior Resident Inspectors

Definition: Semi-annually, calculate the following ratio. The RI training ratio is one of the parameters which can be used to determine whether adequate training opportunities are being made available to the resident inspectors. Non-mandatory training is defined to be all training opportunities that(1) are not required by IMC 1245 to maintain inspector qualification, or (2) are not designated as required by the program office. Non-mandatory training opportunities include courses offered by the NRC Technical Training Center or other organizations whose primary purpose is to offer instruction in a particular subject area.

Number of hours charged by RIs (assigned to multi-unit sites only)
to non-mandatory training over previous 2 quarters
1040 hours

Number of hours charged by SRIs (assigned to multi-unit sites only)
to non-mandatory training over previous 2 quarters
1040 hours

Criteria: None; trend only.

Lead: IIPB, Regions

PR-8 Rotational Opportunities Ratio for Resident Inspectors

Definition: Semiannually, calculate the following ratio. Regional DRPs provide the number of days in which an inspector was on rotation. Rotations are defined as short-term assignments (3 to 4 months) of employees to organizations other than the one to which they are assigned. Count only those rotations documented through personnel actions (SF-52s). The purpose of the rotational assignments is to develop greater overall staff capability and versatility in order to better accomplish the mission of the agency. The rotational opportunities ratio is used to quantify the ability of the regions to provide developmental assignments to the resident inspection staff.

Single-unit Sites:

Total number of days on rotational assignment
(for all inspectors @ single-unit sites only)
[(26 weeks)(5 days/week) = 130 days][# of inspectors @ single-unit sites]

Multi-unit Sites:

Total number of days on rotational assignment
(for all inspectors @ multi-unit sites only)
[(26 weeks)(5 days/week) = 130 days][# of inspectors @ multi-unit sites]

Criteria: None; trend only.

Lead: Regions, IIPB

PR-9 Non-IMC 1245 Training Time Ratio for Region-Based Inspectors

Definition: Semi-annually, calculate the following ratio. The inspector training ratio is one of the parameters which can be used to determine whether adequate training opportunities are being made available to the region-based inspectors. Region-based inspectors include DRP project engineers and

DRS inspectors. Non-mandatory training is defined to be all training opportunities that(1) are not required by IMC 1245 to maintain inspector qualification, or (2) are not designated as required by the program office. Non-mandatory training opportunities include courses offered by the NRC Technical Training Center or other organizations whose primary purpose is to offer instruction in a particular subject area.

Number of hours charged by
region-based inspectors to non-mandatory training during previous 2 quarters
(1040 hours)(# of qualified region-based inspectors)

Criteria: None; trend only.

Lead: IIPB, Regions

PR-10 Rotational Opportunities Ratio for Region-Based Inspectors

Definition: Semi-annually, calculate the following ratio. DRP and DRS organizations provide the number of days in which an inspector was on rotation. Rotations are defined as short-term assignments (3 to 4 months) of employees to organizations other than the one to which they are assigned. Count only those rotations documented through personnel actions (SF-52s). The purpose of the rotational assignments is to develop greater overall staff capability and versatility in order to better accomplish the mission of the agency. The rotational opportunities ratio is used to quantify the ability of the regions to provide developmental assignments to the inspection staff.

Number of days on rotational assignment (total for all region-based inspectors)
[(26 weeks)(5 days/week) = 130 days][# of qualified region-based inspectors]

Criteria: None; trend only.

Lead: Regions, IIPB

END