EXECUTIVE SUMMARY

The Reactor Oversight Process (ROP) self-assessment program evaluates the overall success of the ROP being objective, risk-informed, understandable, and predictable as well as its success in meeting the agency's performance goals of maintaining safety; protection of the environment and the common defense and security; increasing public confidence; making NRC activities and decisions more effective, efficient, and realistic; and reducing unnecessary regulatory burden on stakeholders. On a periodic basis, the self-assessment program collects information from various sources, including the Reactor Program System (RPS), the inspection program, the ROP performance indicator (PI) Program, additional industry level PIs, periodic independent audits, stakeholder surveys, and public comment. Based on this information, an assessment of ROP success in the programmatic areas of PIs, inspection program, significance determination process, and assessment is performed. In addition, an assessment of overall ROP efficacy will be made and recommendations for improvement will be developed.

This report focuses on those self-assessment questions associated with the performance indicator portion of the ROP. Due to the lack of historical data, in depth analysis is not possible at this time. However, where appropriate, some conclusions were reached.

While it is too early to draw definite conclusions after the first full year of initial implementation, favorable feedback from external and internal stakeholders support and indicate the premise that the PIs are objective; understandable; and efficient, effective, and realistic.

The majority of individuals using PIs found them to be objective based on consistent results. Additionally, the number of questions regarding interpretation of PI guidance decreased over time as licensees better understood the PI Program and guidelines. However, problems interpreting the guidance for the Safety System Unavailability (SSU) PIs continue and are being addressed by a joint NRC/Industry working group. The initiating events cornerstone PIs are currently being test piloted and the results of the "unplanned scrams" PI are being analyzed.

All PIs are not risk informed. Those that have risk significance associated with their thresholds, have received favorable comments from numerous stakeholders. There has been a positive trend in stakeholder's perception of the PIs providing useful information in risk-significant areas of licensee performance. Nevertheless, one year of implementation of the ROP is too soon to conclude on the results of this attribute.

The self-assessment results support the premise that PIs are understandable by all users. There have been very few instances of different PI values obtained by different users when using the same guidelines. The level and frequency of PI guidance interpretation questions is declining. Positive feedback was received regarding stakeholders' ability to understand the guidelines and the intent of the PIs. However, problems associated with the SSU PI were noted. In addition, efforts to improve the guidance continue via the frequently asked question (FAQ) process.

The self-assessment results support the conclusion that the PIs appear predictable based on different users obtaining the same results using the same guidance. However, four quarters worth of data is insufficient to conclude on stability and guideline consistency. While reporting discrepancies are trending downward and significant deficiencies occur at low frequencies and changes to PIs occur at a low rate, industry continues to experience problems with the SSU indicator.

The results appear to support the conclusion that the PIs are efficient effective, and realistic. PI reports have been accurate and timely with few discrepancies reported and only one instance of a PI crossing multiple thresholds was noted. However, mixed stakeholder feedback was received regarding the ability of PIs to minimize unintended consequences.

The data indicates that accurate and timely information was provided and that internal stakeholders support the conclusion that the PIs may enhance public confidence. However, additional data and feedback are necessary for an complete appraisal.

Internal stakeholders and some external stakeholders responded that regulatory burden had increased appropriately in the performance indicator reporting area. However, concerns with the SSU PI and appropriate overlap of inspection activities in the Occupational Radiation Safety cornerstone were received. Consequently, a joint NRC/Industry working group has been formed to address concerns with the SSU PI and similar efforts are underway in radiation safety.

The data from the first year of full implementation of the ROP is not sufficient to conclude that the maintaining safety criteria is being met. Whereas few PIs crossed multiple thresholds, stakeholders feedback was mixed regarding unintended consequences and the ability of the PIs to identify declining performance or maintain safety.

OBJECTIVE

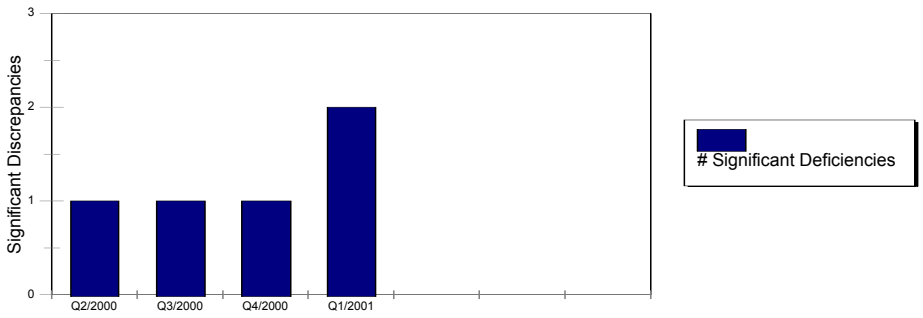
OP1 The PI Values Obtained by Different Users Are the Same, Given the Same Conditions

OP1.a Independent verification of PIs using IP 71151. "PI Verification." Count the number of significant deficiencies that cross thresholds.

How: Regions conduct PI verification. If regions find a discrepancy that crosses threshold, regions record in IR and PIM. Regions report quarterly to IIPB – across all PIs.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison and to establish acceptable range of variability.

Lead: Regions



Comments: Each quarter of the graph represents a four quarter "rolling" sum. Thus, the error/ significant deficiencies are cumulative over four quarters. Significant deviations are defined as reporting discrepancies that would have caused the PI to cross a threshold and missed by the licensee, but identified by the NRC inspector during a PI verification inspection.

Analysis: Two significant deficiencies (one in the 2nd quarter 2000 and one in the 4th quarter 2001) were identified through PI verification inspections (using IP 71151) during the first year of initial implementation of the ROP. The significant deficiencies displayed on the graph reflect a low number of deficiencies. Although these deficiencies occurred at a low frequency, it is too early to determine if there is a stable or decreasing trend.

Other Areas: Understandable (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary)

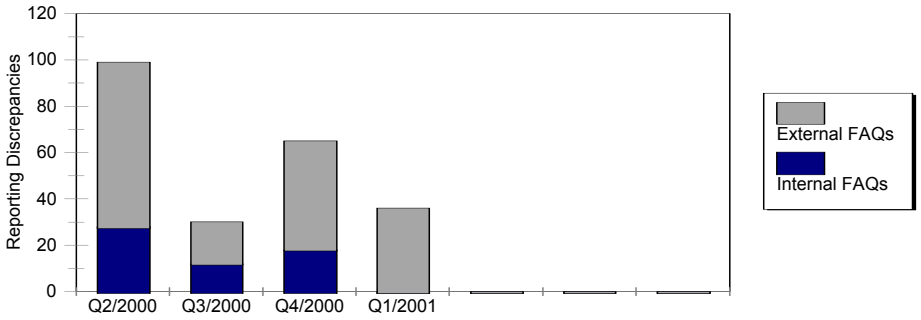
OBJECTIVE

OP1.b Count the number of discrepancies in reporting plus the number of questions regarding interpretations (internal and external FAQs) -- metric is the sum of discrepancies plus FAQs

How: Utility submits change reports to Web page. IIPB collects number of change reports associated with data errors submitted quarterly. IIPB counts the number of internal and external FAQs quarterly.

Success: Expect low numbers (but not as low as OP1a), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB



Comments: Each quarter represents the total number of questions regarding interpretation - cumulative (old plus new).

Analysis: Reporting discrepancies trended downward from the beginning of the initial implementation period, with a “spike” upward in the fourth quarter of 2000. This was primarily due to problems with the safety system unavailability PI guidance. The staff is currently addressing this issue, hence the reporting discrepancies are approaching stability, as seen from quarter to quarter.

Other Areas: Understandable (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden

Conclusion: The majority of those using PIs found them to be objective based on consistent results. Additionally, the number of questions regarding interpretation of PI guidance decreased over time as licensees better understood the PI Program and guidelines. However, problems interpreting the guidance for the Safety System Unavailability (SSU) PIs continue and are being addressed by a joint NRC/Industry working group. The initiating events cornerstone PIs are currently being test piloted and the results of the “unplanned scrams” PI are being analyzed.

RISK-INFORMED

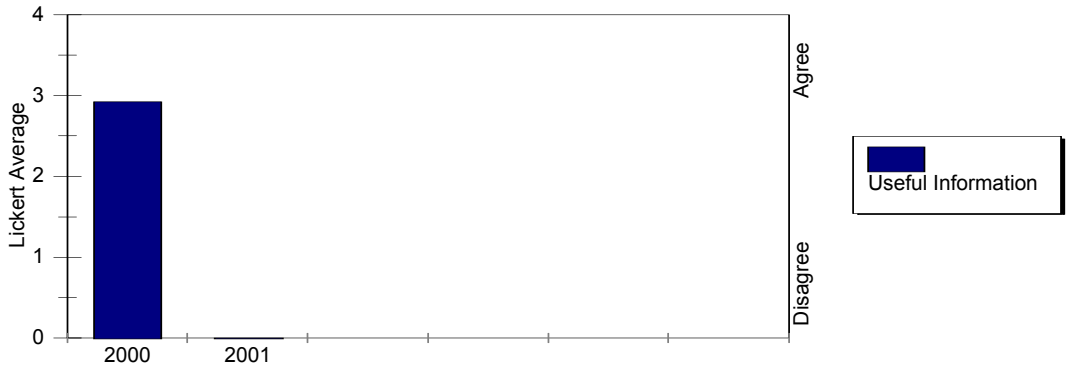
RP1 Provide Useful Information on Risk-Significant Attributes of Licensee Performance

RP1.a Survey internal stakeholders' perceptions of PIs providing useful information on risk-significant areas of licensee performance.

How: Add question to overall survey administered to internal stakeholders

Success: Low number of negative comments, declining/stable trends in numbers of negative comments received.

Lead: IIPB



Comments: During the Pilot Program, a similar survey question was asked. Qualitative review of the responses to that question indicates a positive trend.

Analysis: Stakeholders's responses indicate positive results - that useful information is being provided in risk-significant areas of licensee performance.

Other Areas: None

Conclusion: All PIs are not risk informed. Those that have risk significance associated with their thresholds, have received favorable comments from numerous stakeholders. There has been a positive trend in stakeholder's perception of the PIs providing useful information in risk-significant areas of licensee performance. Nevertheless, one year of implementation of the ROP is too soon to conclude on the results of this attribute.

UNDERSTANDABLE

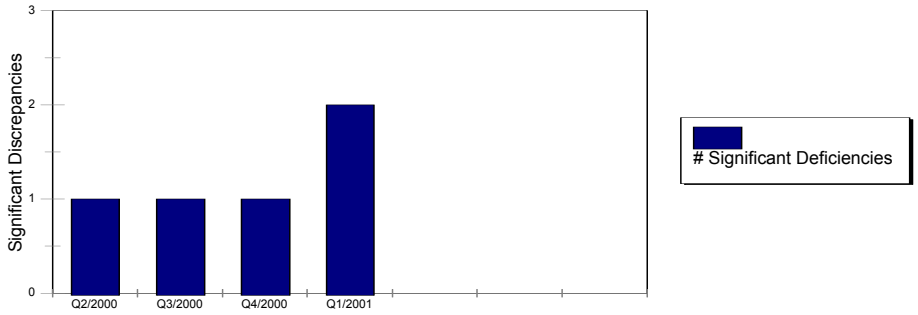
UP1 Performance Indicators Have a Well-defined, Consistent Basis

UP1.a Independent verification of PI using IP 71151, "PI Verification." Count the number of significant deficiencies that cross thresholds (Same as OP1a)

How: Regions conduct PI verification. If regions find a discrepancy that crosses threshold, regions record in IR and PIM. Regions report quarterly to IIPB – across all PIs.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison and to establish acceptable range of variability.

Lead: Regions



Comments: Each quarter of the graph represents a four quarter "rolling" sum. Thus, the significant deficiencies are cumulative over four quarters. Significant deviations are defined as reporting discrepancies that would have caused the PI to cross a threshold and missed by the licensee, but identified by the NRC inspector during a PI verification inspection.

Analysis: Two significant deficiencies (one in the 2nd quarter 2000 and one in the 4th quarter 2001) were identified through PI verification inspections (using IP 71151) during the first year of initial implementation of the ROP. The significant deficiencies displayed on the graph reflect a low number of deficiencies identified via PI verification inspections. Although the significant deficiencies occurred at a low frequency, it is too early to determine if a stable or decreasing trend exists.

Other Areas: Objective (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary)

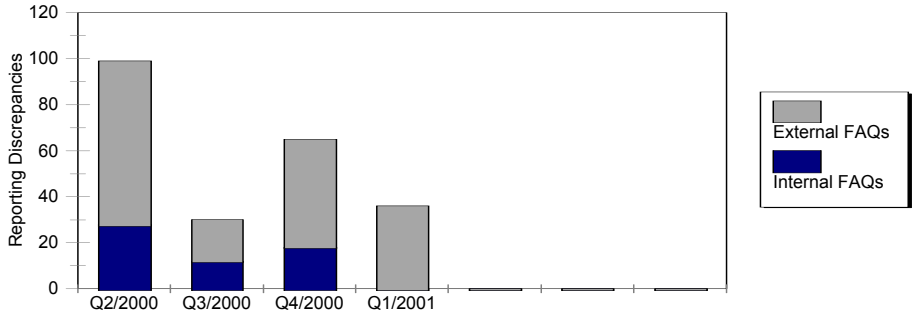
UNDERSTANDABLE

UP1.b Count the number of discrepancies in reporting plus the number of questions regarding interpretations (internal and external FAQs) - metric is sum of discrepancies + FAQs (Same as OP1b)

How: Utility submits change reports to Web page. IIPB collects number of change reports associated with data errors submitted quarterly. IIPB counts the number of internal and external FAQs quarterly.

Success: Expect low numbers (but not as low as OP1a), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB



Comments: During the Pilot Program, a similar survey question was asked. Qualitative review of the responses to that question indicates a negative perception.

Analysis: Reporting discrepancies trended downward from the beginning of the initial implementation period, with a “spike” upward in the fourth quarter of 2000. This was primarily due to problems with the safety system unavailability PI guidance. The staff is currently addressing this issue, hence the reporting discrepancies are approaching stability, as seen from quarter to quarter.

Other Areas: Objective (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden

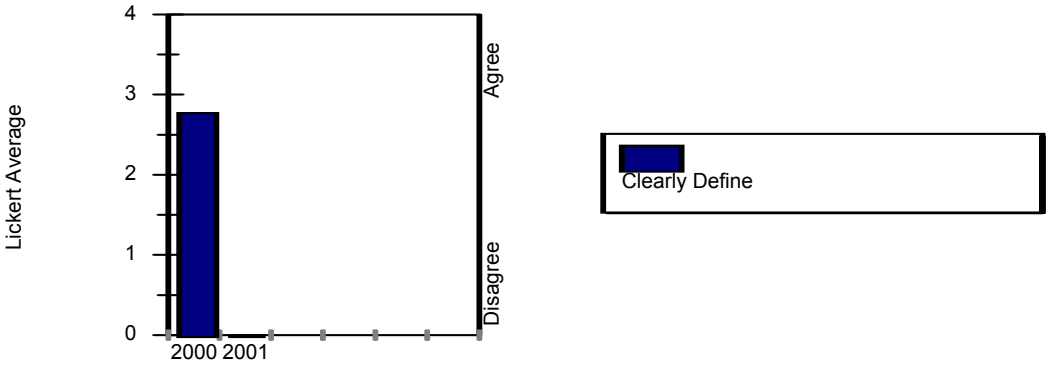
UNDERSTANDABLE

UP1.c Survey internal stakeholders perceptions of the clarity of the guidance contained in NEI 99-02.

How: Add question to overall survey administered to internal stakeholders

Success: Low number of negative comments or examples of interpretation issues.

Lead: IIPB



Comments: During the Pilot Program, a similar survey question was asked. Qualitative review of the responses to that question indicates a positive trend.

Analysis: Stakeholders's responses indicate favorable results - consistently, clear guidance contained in NEI 99-02. The graph represents a continued (from FY 1999) positive trend in the PIs being understandable in FY 2000.

Other Areas: Objective (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden.

UNDERSTANDABLE

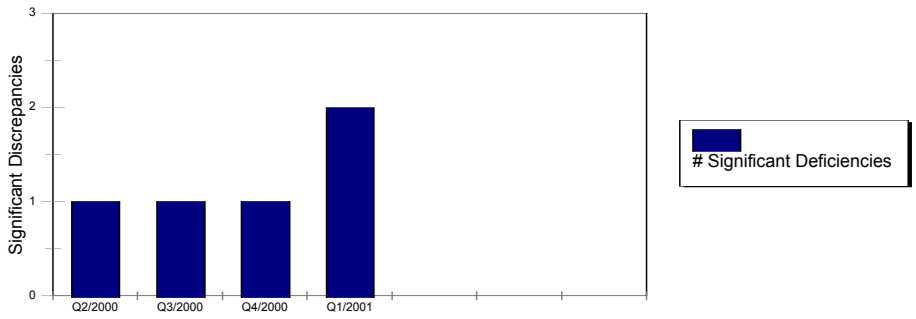
UP2 Are They Understandable By All Users

UP2.a Independent verification of PI using IP 71151, "PI Verification." Count the number of significant deficiencies that cross thresholds

How: Regions conduct PI verification. If regions find a discrepancy that crosses threshold, regions record in IR and PIM. Regions report quarterly to IIPB - across all Pis.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison and to establish acceptable range of variability..

Lead: Regions



Comments: Each quarter of the graph represents a four quarter "rolling" sum. Thus, the error/ significant deficiencies are cumulative over four quarters. Significant deviations are defined as reporting discrepancies that would have caused the PI to cross a threshold and missed by the licensee, but identified by the NRC inspector during a PI verification inspection.

Analysis: Two significant deficiencies (one in the 2nd quarter 2000 and one in the 4th quarter 2001) were identified through PI verification inspections (using IP 71151) during the first year of initial implementation of the ROP. The significant deficiencies displayed on the graph reflect a low number of deficiencies identified via PI verification inspections. Although the significant deficiencies occurred at a low frequency, it is too early to determine if a stable or decreasing trend exists.

Other Areas: Objective (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden.

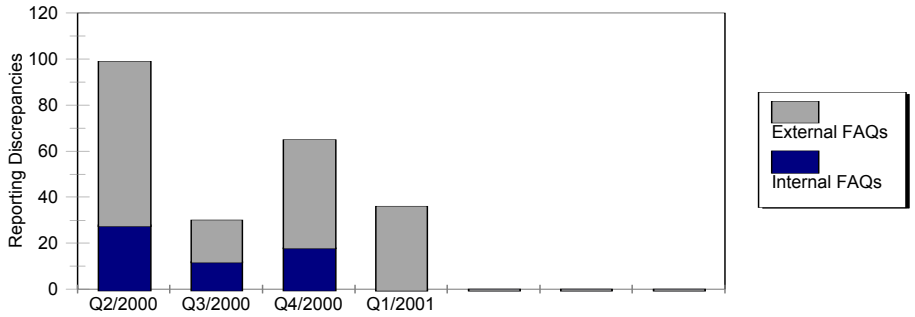
UNDERSTANDABLE

UP2.b Count the number of discrepancies in reporting plus the number of questions regarding interpretations (internal and external FAQs) - metric is sum of discrepancies + FAQs (Same as OP1b)

How: IIPB collects number of change reports associated with data errors submitted quarterly. IIPB counts the number of internal and external FAQs quarterly.

Success: Expect low numbers (but not as low as UP2a), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB



Comments: Each quarter represents the total number of questions regarding interpretation - cumulative (old plus new).

Analysis: Reporting discrepancies trended downward from the beginning of the initial implementation period, with a “spike” upward in the fourth quarter of 2000. This was primarily due to problems with the safety system unavailability PI guidance. The staff is currently addressing this issue, hence the reporting discrepancies are approaching stability, as seen from quarter to quarter.

Other Areas: Objective (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden.

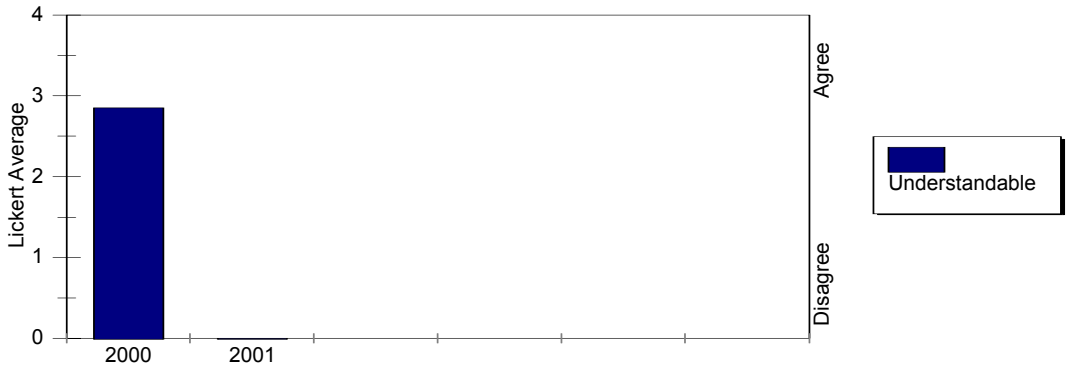
UNDERSTANDABLE

UP2.c Survey internal stakeholders perceptions of the clarity of the guidance contained in NEI 99-02.

How: Add question to overall survey administered to internal stakeholders

Success: Low number of negative comments or examples of interpretation issues.

Lead: IIPB



Comments: During the Pilot Program, a similar survey question was asked. Qualitative review of the responses to that question indicates a positive trend.

Analysis: Stakeholders' responses indicate favorable results - consistently, clear guidance contained in NEI 99-02. The graph represents a continued (from FY 1999) positive trend in the PIs being understandable in FY 2000.

Other Areas: Objective (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden.

Conclusion: The self-assessment results support the premise that PIs are understandable by all users. There have been very few instances of different PI values obtained by different users when using the same guidelines. The level and frequency of PI guidance interpretation questions is declining. Positive feedback was received regarding stakeholders' ability to understand the guidelines and the intent of the PIs. However, problems associated with the SSU PI were noted. In addition, efforts to improve the guidance continue via the frequently asked question (FAQ) process.

PREDICTABLE

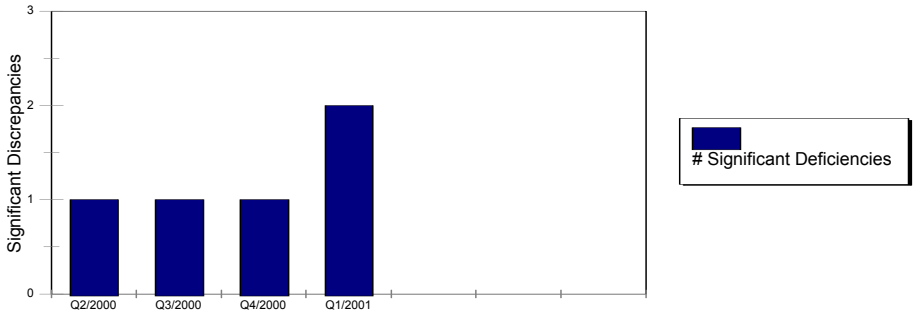
PP1 The PI Values Obtained by Different Users Are the Same, Given the Same Data Inputs - See OP1. Measured by:

PP1.a Independent verification of PI using IP 71151, "PI Verification." Count the number of significant deficiencies that cross thresholds (Same as OP1a)

How: Regions conduct PI verification. If regions find a discrepancy that crosses threshold, regions record in IR and PIM. Regions report quarterly to IIPB – across all PIs.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison and to establish acceptable range of variability.

Lead: Regions



Comments: Each quarter of the graph represents a four quarter "rolling" sum. Thus, the error/ significant deficiencies are cumulative over four quarters. Significant deviations are defined as reporting discrepancies that would have caused the PI to cross a threshold and missed by the licensee, but identified by the NRC inspector during a PI verification inspection.

Analysis: Two significant deficiencies (one in the 2nd quarter 2000 and one in the 4th quarter 2001) were identified through PI verification inspections (using IP 71151) during the first year of initial implementation of the ROP. The significant deficiencies displayed on the graph reflect a low number of deficiencies identified via PI verification inspections. Although the significant deficiencies occurred at a low frequency, it is too early to determine if there is a stable or decreasing trend.

Other Areas: Understandable (Also Primary), Objective (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary)

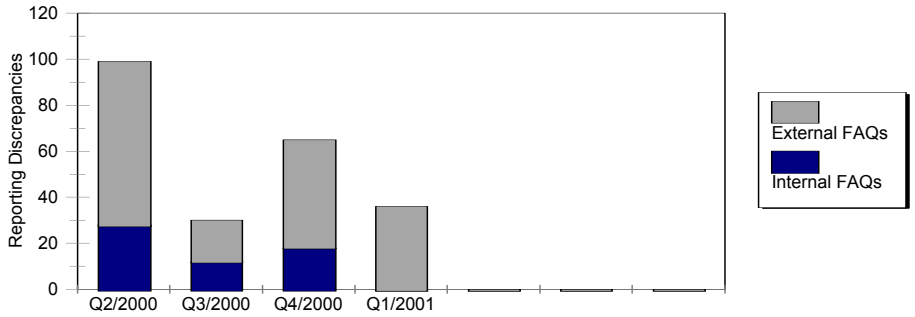
PREDICTABLE

PP1.b Count the number of discrepancies in reporting plus the number of questions regarding interpretations (internal and external FAQs) — metric is sum of discrepancies + FAQs (Same as OP1b)

How: Utility submits change reports to Web page. IIPB collects number of change reports associated with data errors submitted quarterly. IIPB counts the number of internal and external FAQs quarterly.

Success: Expect low numbers (but not as low as OP1a), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB



Comments: Each quarter represents the total number of questions regarding interpretation - cumulative (old plus new).

Analysis: Reporting discrepancies trended downward from the beginning of the initial implementation period, with a “spike” upward in the fourth quarter of 2000. This was primarily due to problems with the safety system unavailability PI guidance. The staff is currently addressing this issue, hence the reporting discrepancies are approaching stability, as seen from quarter to quarter.

Other Areas: Understandable (Also Primary), Objective (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden

PREDICTABLE

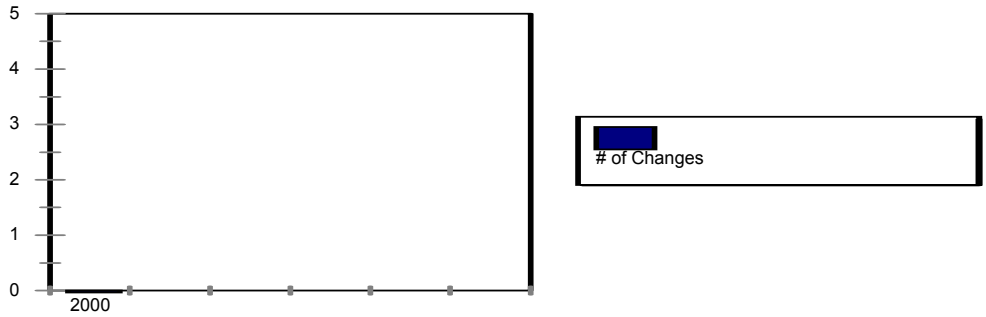
PP2 PIs Stable Over Time. Measured by:

PP2.a Count the number of changes that complete or exit the flow path of the change process

How: IIPB quarterly tracks number of NRC Regulatory Issues Summaries issued to change or replace current PI with an alternate.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB



Comments: Changes to the PIs were expected and anticipated in the inception phase of the ROP framework (SECY 99-007). Historical data was used when available. In those instances that data was not obtained, technical judgement served as the basis. As data becomes available to give an accurate indication of performance, changes are made accordingly.

Analysis: While no changes to PIs were issued during the evaluation period, there have been two Regulatory Issue Summaries (RIS) issued during the 4th quarter of 2000 to pilot test alternate PIs for the unplanned scram and unplanned scram with loss of normal heat removal performance indicators. Pilot testing has ended for these alternate PIs and the results are being analyzed.

Two additional RIS are under development. The RIS to document the pilot testing of a replacement for unplanned power change per 7000 critical hours is being considered for issuance by the end of the 3rd quarter of 2001. The RIS to document changes to the SSU PIis in its beginning stages and is projected to be issued by the end of the 1st quarter of 2002.

Other Areas: Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence, Unnecessary Regulatory Burden

Conclusion: The self-assessment results support the conclusion that the PIs appear predictable based on different users obtaining the same results using the same guidance. However, four quarters worth of data is insufficient to conclude on stability and guideline

consistency. While reporting discrepancies are trending downward and significant deficiencies occur at low frequencies and changes to PIs occur at a low rate, industry continues to experience problems with the SSU indicator. This issue represents the majority of interpretation issues or requests for clarification for internal and external stakeholders. Consequently, the Program Office has formed a task force and a joint NRC/Industry working group to address and resolve the issues associated with this PI.

MAINTAINS SAFETY

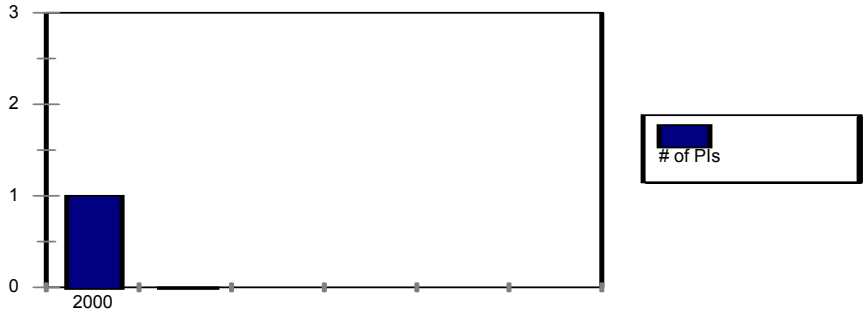
MP1 Provide Timely Indication of Declining Safety Performance. Measured by:

MP1.a Track/trend PIs that cross multiple thresholds (i.e., green to yellow or red), evaluate and characterize (why, should it?) To allow timely interaction

How: Regions report quarterly on numbers of multiple crossed thresholds.

Success: Expect low numbers (near zero), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: Regions



Comments: The graph represents data obtained beginning with the 2nd quarter of 2000, the start of the ROP (initial implementation), until the 4th quarter of 2000

Analysis: The results of the graph indicate that there have been low occurrences of PIs crossing multiple thresholds.

Other Areas: Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence

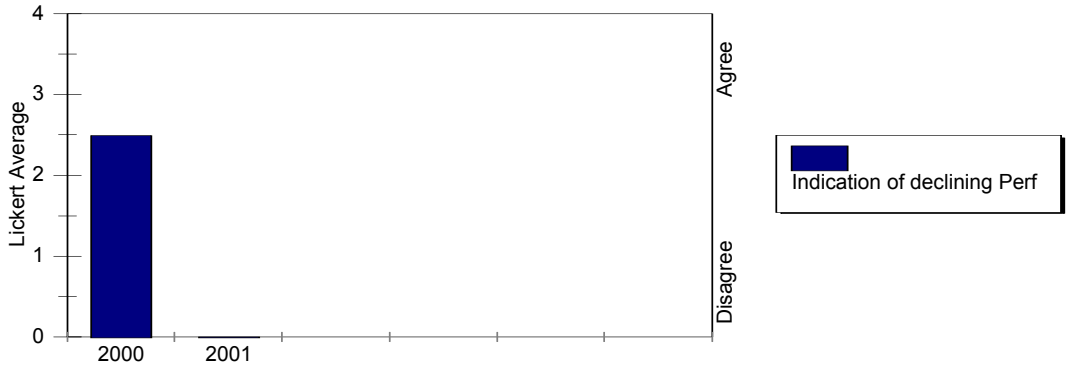
MAINTAINS SAFETY

MP1.b Survey stakeholders' perceptions of PIs giving adequate indication of declining safety performance.

How: Add question to overall survey administered to stakeholders

Success: Low number of negative comments, declining/stable trends in numbers of negative comments received.

Lead: IIPB



Comments: During the Pilot Program, a similar survey question was asked. Qualitative review indicates a positive trend.

Analysis: Stakeholders's responses indicate an evenly split perception that the PIs provide an adequate indication of declining safety performance. However, this represents an improving trend.

Other Areas: Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence

MAINTAINS SAFETY

MP2 Minimize Potential for Licensees Actions Taken in Response to the Performance Indicator Program That Adversely Impact Plant Safety. Measured by:

MP2.a Survey Stakeholders regarding PIs driving undesirable decisions

How: Add question to overall *Federal register* Notice

Success: Expect low numbers of unintended consequences reported, stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB

Results: This question was asked regarding the ROP in general. NEI commented that increased regulatory oversight of planned unavailability of equipment can have a number of unintended consequences, stating that it is important that plants not be unwisely penalized for taking appropriate actions to operate their plants in a safe and economic fashion (e.g. conducting unplanned mitigating system unavailability). STARS commented that the Mitigating Systems performance indicator measures only unavailability and is not a balance between unavailability and reliability. In a related vein, STARS commented that maintenance on mitigating systems during licensing basis approved allowed outage times (AOTs) may result in white PI values and additional inspections, even though the AOT was obtained by demonstrating adequate protection to the health and safety of the general public. TVA commented that the experiences with the treatment of estimated fault exposure time (t/2 time) have shown that this metric can arbitrarily raise the regulatory significance of certain issues. Entergy had six specific comments, the most salient of which was that the NRC PI for safety system unavailability may encourage more stacking of system maintenance during online maintenance (in order to manage the indicator) than might be appropriate from a risk perspective. The State of New Jersey responded that, unfortunately [in its opinion], the ROP is becoming a two tiered system: plants that are all green and plants that are not all green. Licensees focus great effort on getting non-green findings reduced in color. The State of New Jersey also responded that the unintended consequence is that plant owners will do everything possible to eliminate any performance indicators or change inspection findings that are not green, and that minimizes the role of the inspectors in the process.

Internal stakeholders have commented that the Unplanned Power Changes per 7000 hours PI has the potential to for unintended consequences. Consequently, a replacement PI has been proposed and is being considered for pilot testing.

Other Areas: Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence

MAINTAINS SAFETY

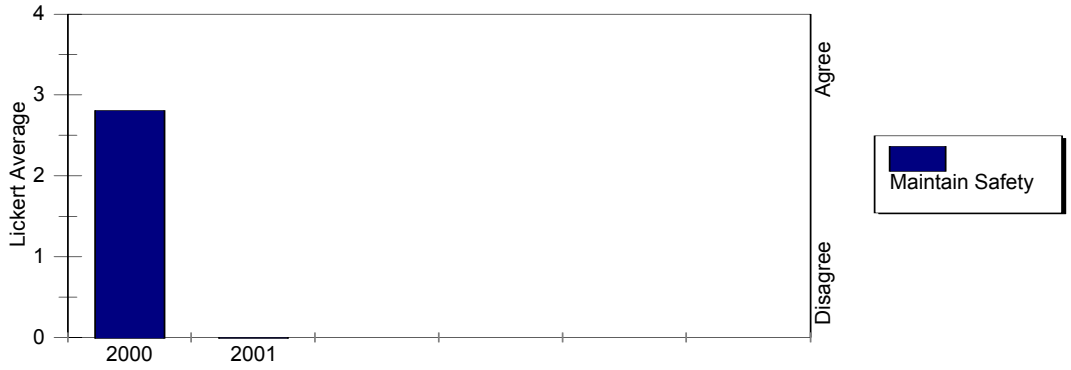
MP3 Do the Performance Indicators Maintain Safety

MP3.a Survey internal stakeholders' perceptions of the PI helping to maintain safety.

How: Add question to overall survey administered to internal stakeholders

Success: Low number of negative comments, declining/stable trends in numbers of negative comments received.

Lead: IIPB



Analysis: Stakeholders's responses indicate favorable results.

Other Areas: Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence

Conclusion: The data from the first year of full implementation of the ROP is not sufficient to conclude that the maintaining safety criteria is being met. Whereas few PIs crossed multiple thresholds, stakeholders feedback was mixed regarding unintended consequences and the ability of the PIs to identify declining performance or maintain safety.

EFFICIENT, EFFECTIVE, AND REALISTIC

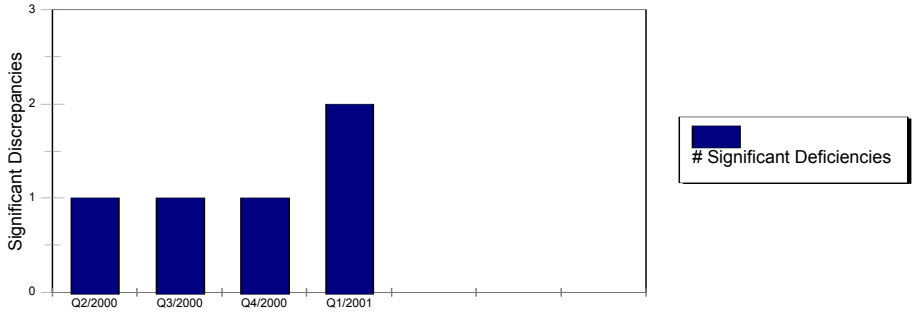
EP1: Reported Accurately

EP1.a Independent verification of PI using IP 71151, "PI Verification."
Count the number of significant deficiencies that cross thresholds. (Same as OP1a)

How: Regions conduct PI verification. If regions find a discrepancy that crosses threshold, regions record in IR and PIM. Regions report quarterly to IIPB – across all PIs.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison and to establish acceptable range of variability.

Lead: Regions



Comments: Each quarter of the graph represents a four quarter "rolling" sum. Thus, the significant deficiencies are cumulative over four quarters. Significant deviations are defined as reporting discrepancies that would have caused the PI to cross a threshold.

Analysis: Two significant deficiencies (one in the 2nd quarter 2000 and one in the 4th quarter 2001) were identified through PI verification inspections (using IP 71151) during the first year of initial implementation of the ROP. The significant deficiencies displayed on the graph reflect a low number of deficiencies identified. Although the significant deficiencies occurred at a low frequency, it is too early to determine if there is a stable or decreasing trend.

Other Areas: Understandable (Also Primary), Predictable (Also Primary), Maintain Safety, Objective (Also Primary), Enhance Public Confidence (Also Primary)

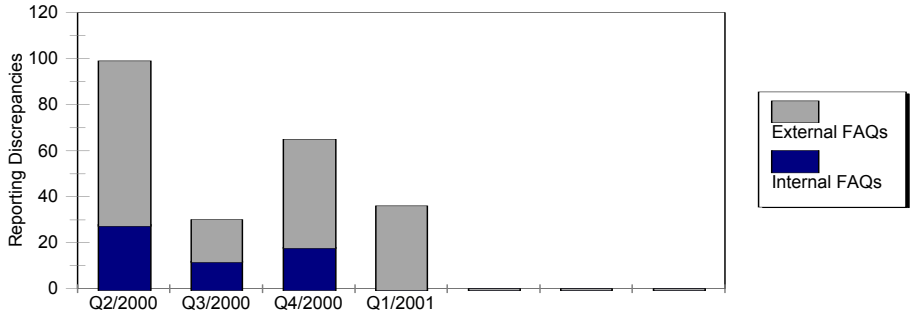
EFFICIENT, EFFECTIVE, AND REALISTIC

EP1.b Count the number of discrepancies in reporting plus the number of questions regarding interpretations (internal and external FAQs) — metric is sum of discrepancies + FAQs (Same as OP1b)

How: Utility submits change reports to Web page. IIPB collects number of change reports associated with data errors submitted quarterly. IIPB counts the number of internal and external FAQs quarterly.

Success: Expect low numbers (but not as low as OP1a), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB



Comments: Each quarter represents the total number of questions regarding interpretation - cumulative (old plus new).

Analysis: Reporting discrepancies trended downward from the beginning of the initial implementation period, with a “spike” upward in the fourth quarter of 2000. This was primarily due to problems with the safety system unavailability PI guidance. The staff is currently addressing this issue, hence the reporting discrepancies are approaching stability, as seen from quarter to quarter.

Other Areas: Understandable (Also Primary), Predictable (Also Primary), Maintain Safety, Objective (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden

EFFICIENT, EFFECTIVE, AND REALISTIC

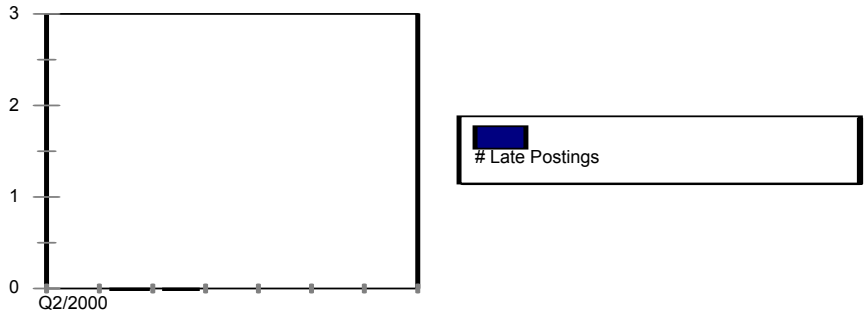
EP2 Information Is Provided in a Timely Manner. Measured by:

EP2.a Track late PI postings on NRC's external web site

How: IIPB counts number of late PI postings on NRC's external web site.

Success: PIs posted on external web site within 5 weeks of end of each quarter.

Lead: IIPB



Analysis: There were no late PI data submissions.

Other Areas: Maintain Safety, Enhance Public Confidence (Also Primary)

EFFICIENT, EFFECTIVE, AND REALISTIC

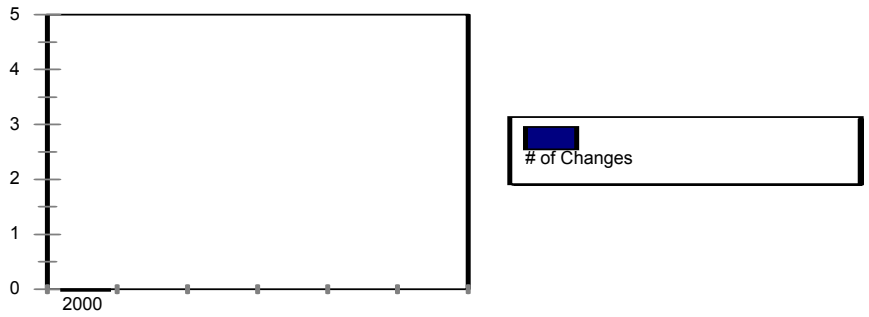
EP3: Process Stable Over Time

EP3.a Count the number of changes that complete or exit the flow path of the change process. (Same as PP2a)

How: IIPB quarterly tracks number of NRC Regulatory Issues Summaries issued to change or replace current PI with an alternate.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB



Comments: Changes to the PIs were expected and anticipated in the inception phase of the ROP framework (SECY 99-007). Historical data was used when available. In instances where data was not available, technical judgement served as the basis. As data becomes available to give an accurate indication of performance, changes are made accordingly.

Analysis: While no changes have been made to PIs, there have been two Regulatory Issue Summary (RIS) issued during the 4th quarter of 2000 to pilot test alternate PIs for the unplanned scram and unplanned scram with loss of normal heat removal performance indicators. Pilot testing has ended for these alternate PIs and the results are being analyzed.

Two additional RIS are under development. The RIS to document the pilot testing of a replacement for unplanned power change per 7000 critical hours is being considered for issuance by the end of the 3rd quarter of 2001. The RIS to document changes to the SSU PIis in its beginning stages and is projected to be issued by the end of the 1st quarter of 2002.

Other Areas: Predictable (Also Primary), Enhance Public Confidence, Unnecessary Regulatory Burden

EFFICIENT, EFFECTIVE, AND REALISTIC

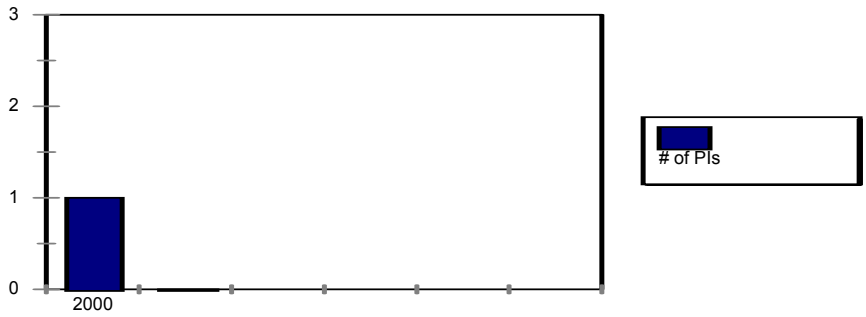
EP4 Provide Timely Indication of Declining Safety Performance

EP4.a Track/trend PIs that cross multiple thresholds (i.e., green to yellow or red) , evaluate and characterize (why, should it?) to allow timely interaction (Same as MP1a)

How: Regions report quarterly on numbers of multiple crossed thresholds.

Success: Expect low numbers (near zero), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: Regions



Comments: This graph represents data obtained beginning with the 2nd quarter of 2000, the start of the ROP (initial implementation), until the 4th quarter of 2000.

Analysis: The results indicate low occurrences of PIs crossing multiple thresholds.

Other Areas: Maintains Safety(Also Primary), Enhance Public Confidence

EFFICIENT, EFFECTIVE, AND REALISTIC

EP5 Minimize Potential for Licensees Actions Taken in Response to the Performance Indicator Program That Adversely Impact Plant Safety

EP5.a Reports of unintended consequences of PIs from stakeholders (Same as MP2a)

How: Survey Stakeholders regarding PIs driving undesirable decisions

How: Add question to overall *Federal register* Notice

Success: Expect low numbers of unintended consequences reported, stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB

Results: This question was asked regarding the ROP in general. NEI commented that increased regulatory oversight of planned unavailability of equipment can have a number of unintended consequences, stating that it is important that plants not be unwisely penalized for taking appropriate actions to operate their plants in a safe and economic fashion (e.g. conducting unplanned mitigating system unavailability). STARS commented that the Mitigating Systems performance indicator measures only unavailability and is not a balance between unavailability and reliability. In a related vein, STARS commented that maintenance on mitigating systems during licensing basis approved allowed outage times (AOTs) may result in white PI values and additional inspections, even though the AOT was obtained by demonstrating adequate protection to the health and safety of the general public. TVA commented that the experiences with the treatment of estimated fault exposure time (t/2 time) have shown that this metric can arbitrarily raise the regulatory significance of certain issues. Entergy had six specific comments, the most salient of which was that the NRC PI for safety system unavailability may encourage more stacking of system maintenance during online maintenance (in order to manage the indicator) than might be appropriate from a risk perspective. The State of New Jersey responded that, unfortunately [in its opinion], the ROP is becoming a two tiered system: plants that are all green and plants that are not all green. Licensees focus great effort on getting non-green findings reduced in color. The State of New Jersey also responded that the unintended consequence is that plant owners will do everything possible to eliminate any performance indicators or change inspection findings that are not green, and that minimizes the role of the inspectors in the process.

Other Areas: Maintains Safety (Also Primary), Enhance Public Confidence

Conclusion: The results appear to support the conclusion that the PIs are efficient effective, and realistic. PI reports have been accurate and timely with few discrepancies reported and only one instance of a PI crossing multiple thresholds was noted. However, mixed stakeholder feedback was received regarding the ability of PIs to minimize unintended consequences.

ENHANCES PUBLIC CONFIDENCE

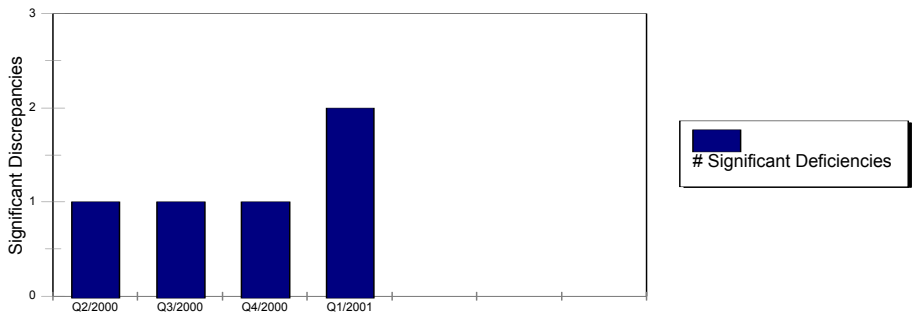
CP1 Accurate, Understandable Information Is Provided in a Timely Manner

CP1.a Independent verification of PI using IP 71151, "PI Verification." Count the number of significant deficiencies that cross thresholds. (Same As OP1a)

How: Regions conduct PI verification. If regions find a discrepancy that crosses threshold, regions record in IR and PIM. Regions report quarterly to IIPB - across all Pis.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison and to establish acceptable range of variability..

Lead: Region



Comments: Each quarter of the graph represents a four quarter "rolling" sum. Thus, the error/ significant deficiencies are cumulative over four quarters. Significant deviations are defined as reporting discrepancies that would have caused the PI to cross a threshold and missed by the licensee, but identified by the NRC inspector during a PI verification inspector.

Analysis: Two significant deficiencies (one in the 2nd quarter 2000 and one in the 4th quarter 2001) were identified through PI verification inspections (using IP 71151) during the first year of initial implementation of the ROP. The significant deficiencies displayed on the graph reflect a low number of deficiencies identified via PI verification inspections. Although the significant deficiencies occurred at a low frequency, it is too early to determine if there is a stable or decreasing trend.

Other Areas: Understandable (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Objective (Also Primary), Unnecessary Regulatory Burden.

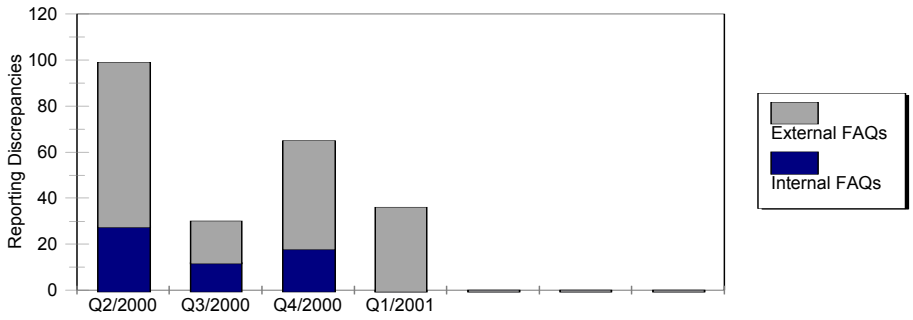
ENHANCES PUBLIC CONFIDENCE

CP1.b Count the number of discrepancies in reporting plus the number of questions regarding interpretations (internal and external FAQs) - metric is sum of discrepancies + FAQs. (Same as OP1b)

How: Utility submits change reports to Web page. IIPB collects number of change reports associated with data errors submitted quarterly. IIPB counts the number of internal and external FAQs quarterly.

Success: Expect low numbers (but not as low as OP1a), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB



Comments: Each quarter represents the total number of questions regarding interpretation - cumulative (old plus new).

Analysis: Reporting discrepancies trended downward from the beginning of the initial implementation period, with a “spike” upward in the fourth quarter of 2000. This was primarily due to problems with the safety system unavailability PI guidance. The staff is currently addressing this issue, hence the reporting discrepancies are approaching stability, as seen from quarter to quarter.

Other Areas: Understandable (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Objective (Also Primary), Unnecessary Regulatory Burden

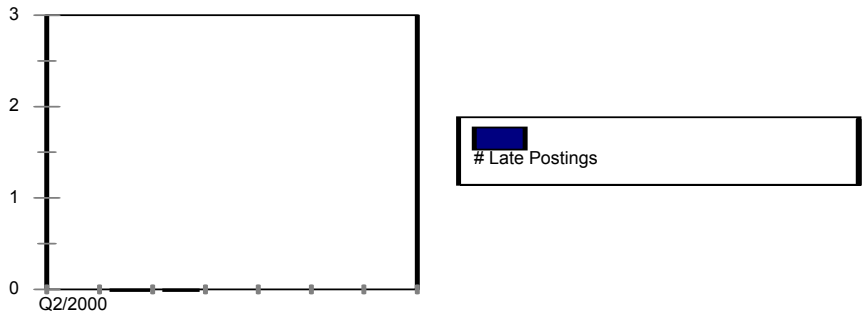
ENHANCES PUBLIC CONFIDENCE

CP1.c Track late PI postings on NRC's external web site. (Same As EP2a)

How: IIPB counts number of late PI postings on NRC's external web site.

Success: PIs posted on external web site within 5 weeks of end of each quarter.

Lead: IIPB



Comments:

Analysis: There were no late PI data submissions reported.

Other Areas: Maintain Safety, Enhance Public Confidence (Also Primary)

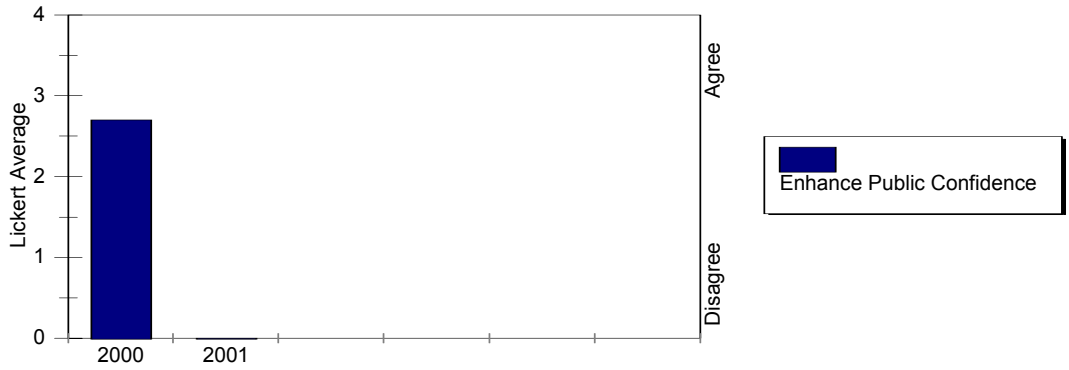
ENHANCES PUBLIC CONFIDENCE

CP1.d Survey internal stakeholders perceptions of the clarity of the guidance contained in NEI 99-02.

How: Add question to overall survey administered to internal stakeholders

Success: Low number of negative comments or examples of interpretation issues.

Lead: IIPB



Comments: This graph represents internal stakeholders comments resulting from surveys.

Additional comments provided a reoccurring concern that the PI Program will not enhance public confidence if most PIs are green.

Analysis: Stakeholders' responses indicate favorable results - the PIs enhance public confidence.

Other Areas: Understandable (Also Primary), Predictable (Also Primary), Maintain Safety, Efficient, Effective & Realistic (Also Primary), Enhance Public Confidence (Also Primary), Unnecessary Regulatory Burden.

Conclusion: The data indicates that accurate and timely information was provided and that internal stakeholders support the conclusion that the PIs may enhance public confidence. However, additional data and feedback are necessary for an complete appraisal.

REDUCES UNNECESSARY REGULATORY BURDEN

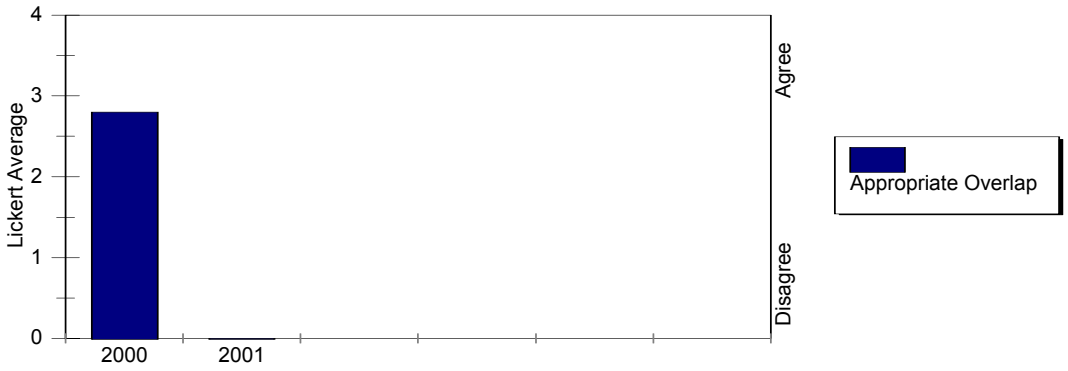
BP1 Stakeholders Perceive Appropriate Overlap of Inspection Program and PIs. Measured by:

BP1.a Survey stakeholders perceptions of overlap between PIs and inspection

How: Add question to overall survey for internal stakeholders and the *Federal Register* Notice for external stakeholders.

Success: Low number of negative comments, declining/stable trends in numbers of negative comments received.

Lead: IIPB



Comments: This graph represents internal stakeholders comments resulting from surveys.

Analysis: Internal stakeholders' responses indicates favorable results - appropriate overlap between PIs and inspection efforts. In response to the *Federal Register* Notice, NEI commented that there is unnecessary overlap in the area of radiation safety inspection and the Occupational Exposure Control Effectiveness PI.

Other Areas: None

REDUCES UNNECESSARY REGULATORY BURDEN

BP2 Reporting Conflicts Are Reduced. Measured by:

BP2.a Solicit licensees and other external stakeholders regarding perceived overlap between reporting requirements, such as INPO, WANO, and Maintenance Rule

How: Add question to *Federal Register* Notice

Success: Low number of negative comments, declining/stable trends in numbers of negative comments received.

Lead: IIPB

Results: Industry and some non-industry responders generally believe that resolving overlap and/or inconsistencies between NRC, WANO, Maintenance Rule, and probabilistic safety assessment (PSA) reporting requirements which impact the reporting of the SSU PI is of urgent importance. However, most non-industry responders commented that the regulatory burden associated with PI reporting is appropriate.

Other Areas: None

Conclusion: Internal stakeholders and some external stakeholders responded that regulatory burden had increased appropriately in the performance indicator reporting area. However, concerns with the SSU PI and appropriate overlap of inspection activities in the Occupational Radiation Safety cornerstone were received. Consequently, a joint NRC/Industry working group has been formed to address concerns with the SSU PI and similar efforts are underway in radiation safety.