

**From:** Shaun Anderson  
**To:** Doris Mendiola; NRCREP  
**Date:** Wed, Dec 29, 2004 10:57 AM  
**Subject:** NEI Response  
**Place:** NRCREP

*12/29/04  
RDB received  
DW*

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*69FR63411*

Morning,  
Just to give additional information, here are the comments we received from NEI.  
Thanks  
Shaun

*(21)*

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**Creation Date:** Wed, Dec 29, 2004 10:57 AM  
**From:** Shaun Anderson

**Created By:** SMA1@nrc.gov

**Recipients**

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RDB received



NUCLEAR ENERGY INSTITUTE

Anthony R. Pietrangelo  
SENIOR DIRECTOR, RISK REGULATION  
NUCLEAR GENERATION

December 16, 2004

11/01/04

Mr. Michael T. Lesar  
Chief, Rules and Directives Branch  
Office of Administration  
Mail Stop: T-6D59  
U.S. Nuclear Regulatory Commission  
Washington DC 20555-0001

69 FR 63411

(21)

SUBJECT: Solicitation of Public Comments on the Implementation of the Reactor Oversight Process (ROP)

Dear Mr. Lesar:

On behalf of the nuclear energy industry, the Nuclear Energy Institute (NEI) is submitting the enclosed comments on the implementation of the ROP, as requested by the Nuclear Regulatory Commission in the *Federal Register* on November 1, 2004 (69 *Fed. Reg.* 63411).

The ROP, initially implemented in April 2000, has been an enormous improvement over its predecessor, the Systematic Assessment of Licensee Performance (SALP) program. In general, we believe the ROP is meeting the established performance goals. We appreciate the opportunity to publicly meet with the NRC staff on a monthly basis to provide direct input to revisions and enhancements of the ROP, and we look forward to ongoing discussions in the coming year.

If there are any questions regarding these comments, please contact Tom Houghton at (tch@nei.org or 202-739-8107), or me at 202-739-8081.

Sincerely,

Anthony R. Pietrangelo

Enclosure

F-RFDS = ADM-03

add = S. Gardner (5155)

S. Anderson (5111)

SFSP Review Complete

Template = ADM-013

## FRN ON REACTOR OVERSIGHT PROCESS

### *Questions Related to Specific ROP Program Areas*

(As appropriate, please provide specific examples and suggestions for improvement.)

#### *(1) Does the Performance Indicator Program promote plant safety?*

Initial ROP Implementation<sup>1</sup> 2.56  
Current ROP 2.67

#### *Comments:*

Yes, the Performance Indicator Program, in conjunction with the inspection findings of the ROP Inspection Program, promotes plant safety. Both are used as indicators of safety performance and were designed to provide objective, risk-informed outcomes. Licensees have programs and take actions that minimize the potential for outcomes that adversely impact safety. If performance begins to degrade, the licensee is required to determine the cause(s) for declining performance and provide effective corrective action. The NRC also increases its inspection activity in a graduated manner as performance starts to decline, as indicated by the safety significance of inspection findings. Thus the combined program elements provide incentives to minimize the potential for licensees to take actions that adversely impact plant safety, and provide early warning should performance begin to decline. Since the onset of the program, performance has either improved or remained stable and well within the acceptable band of performance. For example:

- Heat removal (RCIC and AFW) availability has improved 19%
- Safety System Functional Failures dropped 53%
- Unplanned Power Changes have decreased 48%
- ERO Drill Participation has increased 13%
- Protected Area Security Equipment Index has improved by 66%
- Occupational Radiation Safety has improved by 43%

There are two performance indicators which have the potential to influence licensees to take actions that could adversely impact plant safety; however, action is underway to revise these two indicators.

The first is the Safety System Unavailability. This indicator only measures system unavailability (it does not address unreliability), and has generic, rather than plant specific thresholds. The potential exists to minimize down time for preventive or predictive maintenance because that will minimize unavailability and there is no penalty for train failure in the PI. This potential problem can be eliminated by replacing the safety system unavailability indicator with the proposed and successfully piloted Mitigating System Performance Index (MSPI) which balances availability and reliability and sets plant specific thresholds of performance aligned

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<sup>1</sup> Scores represent industry average from those utilities responding to NEI

with risk. Industry and NRC have established a target date of January 2006 to have this replacement in place.

The second problem indicator is the Scrams with Loss of Normal Heat Removal. The initial wording and intention of this indicator has been changed over the past several years, sending an implied message that operators should be focusing their attention on the status of non-safety related equipment (main feedwater pumps) during transients, whereas the emergency operating procedures emphasize focusing on safety-related equipment (auxiliary feedwater pumps). In addition, the staff appears to believe that intentionally closing the main steam isolation valves (MSIVs) under conditions of very low decay heat warrants being considered as a count against performance. Closing the MSIVs in this situation is entirely appropriate, is not a loss of heat removal capability, and should not be considered an action which increases risk. These interpretations do not promote safety. Industry and NRC are working aggressively to develop a replacement for this indicator which will identify those scrams which are the most challenging to operators, and hence are more risk-significant.

*(2) Does appropriate overlap exist between the Performance Indicator Program and the Inspection Program?*

Initial ROP Implementation      2.78

Current ROP                              2.67

*Comments:*

In general, yes. If anything, there is excessive overlap. For example, NRC performs an SDP for each occurrence of single equipment failure, even though a safety system unavailability PI already exists. Implementation of the MSPI will assess unavailability and unreliability; however, NRC has stated that it will continue to conduct SDPs for simple, single failures. Another example of excessive overlap is the Scrams with Loss of Normal Heat Removal. NRC performs a risk assessment of every scram to determine the need for additional inspection; therefore, there is no need to have a redundant PI, the Scrams with Loss of Normal Heat Removal, which purports to identify risk significant scrams. The replacement indicator described above will be an improvement, but NRC has stated that it will continue to perform assessments of every scram.

We believe that there is a significant opportunity for the NRC to streamline and make more efficient the inspection procedures for the occupational and public radiation safety cornerstones. The scope, frequency, and duration of inspection in these areas appear unnecessarily burdensome when compared to the current level of industry performance and types of findings that have been issued. It would be better use of resources if the NRC would reduce baseline inspection in areas in which performance indicators indicate good performance, and determine what, if any, areas require more inspection, as evidenced by operating experience or newly emerging generic safety areas of concern.

Finally, industry believes that NRC is spending too much time verifying performance indicators, and questioning items that could only have trivial impact. For example, raising questions regarding a few hours of safety system unavailability over a three year period (e.g., a half dozen hours out of 26,280, or 0.02% unavailability) is counterproductive. The inspection program is supposed to be risk-informed. Spending time addressing trivial questions is not an appropriate use of NRC or licensee resources.

*(3) Is the reporting of PI data efficient?*

Initial ROP Implementation 2.52

Current ROP 2.22

*Comments:*

Yes, the reporting of PI data is efficient. A significant improvement was made when industry shifted to the Consolidated Data Entry (CDE) technology, which allows better management of data for different uses. However, there continue to be differences in reporting and definitions amongst the ROP, WANO/INPO and maintenance rule. Implementation of the MSPI will address many of the differences. In addition, several minor changes will be necessary in maintenance rule implementing guidance to improve consistency and efficiency.

*(4) Does NEI 99-02, "Regulatory Assessment Performance Indicator Guideline" provide clear guidance regarding Performance Indicators?*

Initial ROP Implementation 2.67

Current ROP 2.67

*Comments:*

Yes, NEI 99-02 provides clear guidance regarding performance indicators. As described above, replacements are needed for the Scrams with Loss of Normal Heat Removal and the Safety System Unavailability PI. These replacement indicators will provide better indication of safety and will be more clearly defined.

For the most part, the Frequently Asked Questions (FAQ) process has proven useful and efficient in resolving questions on the PI guidance. The backlog of FAQs has remained small (with the exception of the to-be-replaced Scrams with Loss of Normal Heat Removal PI). A revision of NEI 99-02 will be published early in 2005 which incorporates FAQs since the previous revision. This revision provides more specific guidance in preparing an FAQ which should further improve the process.

*(5) Is the information in the inspection reports useful to you?*

Initial ROP Implementation 2.56

Current ROP 2.44

*Comments:*

Information in the inspection reports is useful and acceptably formatted. The reports should continue to focus on risk and safety significant issues, leaving any suggestions for improvements to be discussed at the inspection exit meeting.

*(6) Does the Significance Determination Process yield equivalent results for issues of similar significance in all ROP cornerstones?*

Initial ROP Implementation 3.56

Current ROP 3.67

*Comments:*

No. While the reactor SDP provides a risk-informed, structured, and generally consistent result for similar issues, the more deterministic SDPs do not result in equivalent results for issues of similar risk significance across different cornerstones. In general, they represent a deterministic escalation for various types of regulatory noncompliance, and more reflect NRC concern over programmatic issues. We have observed improvements in consistency in assessing outcomes of similar issues in revisions to the Emergency Preparedness, Occupational Radiation Safety, and Public Radiation Safety SDPs. There have been several new SDPs produced over the past year. We believe additional time will be necessary to determine their quality in appropriately assessing performance, such as the Fire Protection, Steam Generator, Containment, and Shutdown SDPs. We are, however, especially concerned about the draft Maintenance Rule SDP and the Physical Security SDP, and have made those concerns known to the staff.

Industry shares NRC's concern with improving the SDPs, so that the inspection findings can play their appropriate role in informing NRC decision making regarding assignment of its inspection resources. To be effective, the SDP results must be accurate, timely, and resource efficient (more resources should not be invested in determining the color than in inspecting the corrective action). This "triple constraint" has not been achieved; in fact, the resources expended on determining the SDP outcome have increased, while the timeliness has decreased. Both NRC and industry are working on solutions which will result in improvements to timeliness and resource expenditure while not sacrificing accuracy of the results.

We recommend that NRC conduct semiannual lessons learned workshops on SDPs. The purpose of these workshops would be to share information from completed SDPs to improve efficiency in assessing similar situations or analyses; to inform the industry and public of changes to SDPs; to explore ways to improve the timeliness of SDPs; to enhance consistency of NRC and industry across regions; and to address PRA issues of generic interest.

*(7) Does the NRC take appropriate actions to address performance issues for those licensees outside of the Licensee Response Column of the Action Matrix?*

Initial ROP Implementation 2.44

Current ROP 2.44

*Comments:*

Yes, for the most part we have found that NRC takes appropriate actions to address performance issues for those licensees outside of the Licensee Response Column of the Action Matrix.

*(8) Is the information contained in assessment reports relevant, useful, and written in plain English?*

Initial ROP Implementation      2.67

Current ROP                              2.33

*Comments:*

The new format is brief and focused on objective performance measures. Industry has found the reports to be relevant, useful, and written in plain English. We are concerned, however, about the bases and closure process for substantive crosscutting issues. Finally, we believe NRC should consider using the public meetings associated with the annual assessment reports as an opportunity to do more outreach/education work with the public on the reactor oversight process and its value in maintaining safety, reducing unnecessary regulatory burden, improving effectiveness and efficiency, and informing the public.

*Questions related to the efficacy of the overall Reactor Oversight Process (ROP) (As appropriate, please provide specific examples and suggestions for improvement.)*

*(9) Are the ROP oversight activities predictable (i.e., controlled by the process) and reasonably objective (i.e., based on supported facts, rather than relying on subjective judgment)?*

Initial ROP Implementation      2.56

Current ROP                              2.67

*Comments:*

For the majority of the normal baseline inspections, the ROP oversight activities are predictable and objective as reported in the end product (i.e. the inspection report). During the course of the actual inspection activities this is not always the case. Most inspectors follow the guidance but a few still appear to use aggregation and "reverse SDP" techniques. (Reverse SDP means predetermining significance of an issue based on subjective judgment and then developing the supporting arguments.) The subjective nature of some of the SDP screening questions reduces the predictability of the ROP oversight activities.

There are not clear criteria for the documentation of crosscutting aspects. What guidance does exist is not definitive or consistently applied, and relies on individual subjectivity. There are also continued questions about the bases and closure process for substantive crosscutting issues identified in the assessment letters. There do not seem to be established criteria for identification and resolution of these substantive crosscutting issues and the process appears to be very subjective.

*(10) Is the ROP risk-informed, in that the NRC's actions are graduated on the basis of increased significance?*

Initial ROP Implementation 2.56

Current ROP 2.67

*Comments:*

The majority of the ROP is risk-informed due to actions taken over the years of implementation to further risk-inform the process. Actions that result from findings that are classified using the Reactor Safety SDP, IMC 0609 Appendix A are the most risk-informed and are the ones most graduated on the basis of an actual increased significance. Actions resulting from findings that are classified based on SDPs that are still deterministic in nature are not as likely to be graduated consistent with actual significance. As we stated last year, we believe that white inspection findings should be closed out and removed from the action matrix when the NRC follow-up inspection has determined that effective corrective action has been achieved.

*(11) Is the ROP understandable and are the processes, procedures and products clear and written in plain English?*

Initial ROP Implementation 2.67

Current ROP 2.56

*Comments:*

In general the ROP is understandable and the processes, procedures, and products are clear and written in plain English. There is little guidance or established process for the closing of a substantive crosscutting issue. There are some areas that need clarification such as the definitions and distinction amongst "self identified," "self revealing," and "inspector identified." Because of their technical complexity, some of the newer SDPs do require a specific technical background to understand. The Fire Protection, Shutdown, and Steam Generator SDPs have been particularly difficult to follow. The Fire Protection SDP is more technically accurate than its predecessor in determining risk significance, but it also requires more knowledge of risk techniques.

*(12) Does the ROP provide adequate regulatory assurance when combined with other NRC regulatory processes that plants are being operated and maintained safely?*

Initial ROP Implementation 2.11

Current ROP 2.00

*Comments:*

Industry believes that the ROP provides adequate regulatory assurance, when combined with other NRC regulatory processes, that nuclear plants are being operated and maintained safely within the known design basis and operating experience of the industry. The process is designed to identify weaknesses of lower safety significance before safety breakdowns occur which result in the potential for risk to the public. The Davis-Besse event, however, made it clear that continual improvement is needed in the ROP and in licensees' oversight programs to

incorporate operating experience and new phenomena which were unknown and therefore were not included in inspection or oversight. NRC and industry must continue to assess and strengthen operating experience and corrective action programs to avoid complacency and blindness to evolving degradation.

*(13) Does the ROP improve the efficiency, effectiveness, and realism of the regulatory process?*

Initial ROP Implementation 2.44

Current ROP 2.44

*Comments:*

The ROP is a vast improvement over the old SALP process. Inspections are more focused, findings are evaluated using a more structured tool, and performance assessment is more objective. Efficiency could be gained by combining related inspections activity and evaluating the need for some inspection activity that may be excessive, such as in the area of occupational radiation protection which has been very good performing area. As discussed above, additional efficiencies could be gained by moving on in an SDP when the point of diminished returns is reached and the effort expended by licensees and the NRC to evaluate the significance of a problem is more than performing an inspection. (However, this approach will require a consideration of the impact on the action matrix as a whole. We will be prepared to meet with NRC early in 2005 to discuss this issue.) In addition, we believe that effectiveness and efficiency could be improved significantly by allowing licensees to employ their own assessments with NRC oversight to substitute for some inspection modules every other inspection cycle, such as the design engineering, radiation protection, and fire protection areas. NRC intends that fire protection inspections during the next triennial cycle will provide enforcement discretion for findings related to fire-induced circuit failures if a self-assessment using NEI 04-06 or other assessment methods is performed. This is a useful step toward increasing the amount of credit provided in inspection space for self-assessments covering a broader range of fire protection issues. We encourage NRC to continue work on exploring the possibility of licensee assessment substituting for NRC inspection through a pilot program with industry.

*(14) Does the ROP ensure openness in the regulatory process?*

Initial ROP Implementation 1.89

Current ROP 2.11

*Comments:*

For most areas of the ROP, the regulatory process is open. However, security has been very closed and disassociated with the rest of the ROP. Also, examples of some communication breakdowns have been realized especially when inspection information is processed in the Region. Licensees have reported cases when field inspectors debrief with licensee staff and leave the station with the understanding that an item or event observed is not an issue or one of very little significance. Then a day before (or in some cases the day of) the exit meeting, licensees are told

that the finding or observation will be characterized as having a higher level of significance. We are concerned that these changes in characterization are happening during regional review without an open dialogue with the licensee.

*(15) Has the public been afforded adequate opportunity to participate in the ROP and to provide inputs and comments?*

Initial ROP Implementation 1.89  
Current ROP 2.00

*Comments:*

Industry has found that the NRC has provided adequate opportunity to all external stakeholders to participate in the ROP and to provide input. Open public meetings at sites and the monthly ROP meeting provide opportunities to ask questions and provide comments. We hope that this same openness and sharing of information which allows joint problem solving and a more effective, efficient, and safety focused oversight process will continue.

*(16) Has the NRC been responsive to public inputs and comments on the ROP?*

Initial ROP Implementation 2.67  
Current ROP 3.22

*Comments:*

For the most part, yes. The NRC makes special efforts to recognize the public representatives at public ROP meetings and allows the public to have an opportunity to voice their opinion on the issues discussed. Public comments are received, evaluated, and dispositioned in a professional manner.

*(17) Has the NRC implemented the ROP as defined by program documents?*

Initial ROP Implementation 2.33  
Current ROP 2.67

*Comments:*

For the most part, yes. More program definition is needed in the area of cross cutting issues and how to document and close these issues. Occasional differences in interpreting the ROP documents have occurred, the most noticeable being the way some inspectors interpret NEI 99-02. Some inspectors try to make problems that occur in a cornerstone count in an indicator when the problem does not relate to the performance indicator. These problems are more appropriately evaluated and dispositioned using the inspection program and SDP.

*(18) Does the ROP reduce unnecessary regulatory burden on licensees?*

Initial ROP Implementation 2.67  
Current ROP 2.89

*Comments:*

The ROP has significantly reduced unnecessary regulatory burden. The ROP eliminated the requirement to respond in writing to minor violations (green findings). This practice permits licensees to focus on fixing problems, not

generating time-consuming, non-value added correspondence. Industry has found that improvements in inspection planning and schedule performance allow for better utility planning and resource utilization. Improvement in the SDP resolution process (timeliness and resource burden while maintaining accuracy), as discussed above, would further reduce unnecessary regulatory burden. Less inspection time spent on minor reporting issues in the PIs would also reduce burden without affecting safety. After some experience with the MSPI, further burden could be reduced if NRC would eliminate the practice of conducting an SDP for simple, single equipment failures on MSPI monitored equipment. This practice has been characterized as "chasing random failures."

*(19) Does the ROP minimize unintended consequences?*

Initial ROP Implementation      2.78

Current ROP                              3.00

*Comments:*

The ROP does minimize unintended consequences with negative safety implications. However, the following examples of unintended consequences could occur under the current process:

- As discussed above, the scrams with loss of normal heat removal PI and the safety system unavailability PI have the potential for unintended consequences. Action is underway by NRC and industry to correct these indicators.
- Findings of low safety significant based on condition reports written by licensees are being documented in inspection reports. When inspectors asked for "all condition reports" for the past year or two and document the ones that rise to the level of low safety significant findings, licensees view this as "mining" the corrective action program. This type of inspection activity provides a disincentive for licensees to document problems.

*(20) Please provide any additional information or comments related to the Reactor Oversight Process.*

Industry believes an ROP public workshop would be appropriate to discuss the status of the program, address lessons learned (particularly in the SDP area, see Question 6), and brain storm new ideas to continuously improve the ROP.

Industry suggests that NRC continue its efforts to refine inspection scope, inspection frequency, and inspector-hour commitments based on experience. In particular, industry supports efforts to integrate radiological controls inspections and coordinate with outage activities. Industry would also suggest that NRC look for additional ways to conduct single inspections for utility programs that are common to multiple sites (e.g., access authorization, fitness for duty, and environmental monitoring).