SOLICITATION OF PUBLIC COMMENTS ON THE 2006 IMPLEMENTATION OF THE REACTOR OVERSIGHT PROCESS

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Note: Those who wish to complete this survey anonymously will not receive direct response from the NRC.

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Add=Bart Fu (zbf)

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## QUESTIONS

In responding to these questions, please consider your experiences using the NRC oversight process.

Shade in the circle that most applies to your experiences as follows:

1) Strongly Agree 2) Agree 3) Neutral 4) Disagree 5) Strongly Disagree

If there are experiences that are rated as unsatisfactory, or if you have specific thoughts or concerns, please elaborate in the "Comments" section that follows the question and offer your opinion for possible improvements. If there are experiences or opinions that you would like to express that cannot be directly captured by the questions, document that in the last question of the survey.

**Questions related to specific Reactor Oversight (ROP) program areas**
(As appropriate, please provide specific examples and suggestions for improvement.)

(1) The Performance Indicator Program provides useful insights to help ensure plant safety.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(2) Appropriate overlap exists between the Performance Indicator Program and the Inspection Program.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(3) NEI 99-02, "Regulatory Assessment Performance Indicator Guideline" provides clear guidance regarding Performance Indicators.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(4) The Performance Indicator Program, including the Mitigating Systems Performance Index, can effectively identify performance outliers based on risk-informed, objective, and predictable indicators.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(5) The Inspection Program adequately covers areas important to safety, and is effective in identifying and ensuring the prompt correction of any performance deficiencies.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☒ |

Comments: See attached

(6) The information contained in inspection reports is relevant, useful, and written in plain English.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☒ | ☐ | ☐ | ☐ |

Comments: See attached

(7) The Significance Determination Process yields an appropriate and consistent regulatory response across all ROP cornerstones.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☒ |

Comments: See attached

(8) The NRC takes appropriate actions to address performance issues for those plants outside of the Licensee Response Column of the Action Matrix.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(9) The information contained in assessment reports is relevant, useful, and written in plain English.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☒ | ☐ | ☐ | ☐ |

Comments: See comment attached

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

(10) The ROP oversight activities are predictable (i.e., controlled by the process) and reasonably objective (i.e., based on supported facts, rather than relying on subjective judgement).

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached.

(11) The ROP is risk-informed, in that the NRC's actions and outcomes are appropriately graduated on the basis of increased significance.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(12) The ROP is understandable and the processes, procedures and products are clear and written in plain English.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(13) The ROP provides adequate regulatory assurance, when combined with other NRC regulatory processes, that plants are being operated and maintained safely.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☒ |

Comments: See attached

(14) The ROP safety culture enhancements help identify licensee safety culture weaknesses and focus licensee and NRC attention appropriately.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☒ |

Comments: See attached

(15) The ROP is effective, efficient, realistic, and timely.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☒ |

Comments: See attached

(16) The ROP ensures openness in the regulatory process.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(17) The public has been afforded adequate opportunity to participate in the ROP and to provide inputs and comments.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☒ |

Comments: See attached

(18) The NRC has been responsive to public inputs and comments on the ROP.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☒ |

Comments: See attached

(19) The NRC has implemented the ROP as defined by program documents.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

(20) The ROP minimizes unintended consequences.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☒ |

Comments: See attached

(21) You would support a change in frequency of the ROP external survey from annually to every other year, consistent with the internal survey, as proposed in SECY-06-0074.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☒ | ☐ |

Comments: See attached

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

See attached

Comments on ROP

These comments are limited to my personal experiences and insights identified in the course of conducting four CDBI Inspections in the 2005/2006 time frame as an NRC contractor.

A major weakness in the Region-based CDBI inspections (which are an integral part of the ROP), has been the inability or unwillingness to bypass pre-conceived and pre-existing roadblocks, and mind-sets. Though these impediments vary from Region to Region, they have been instrumental in preventing the identification and documentation of many potentially significant issues at nuclear power plants, which in my view could be precursors to potential accidents.

Some of these roadblocks and mind-sets are identified below:

1. High-risk is the cornerstone of ROP, and appears to be directing the Region-based inspection efforts without exception; if a finding does not meet the threshold criteria of high-risk it is a likely to be dismissed. With this pre-conditioning, low-risk components do not have a chance of being recognized in the ROP. In addition, the ROP uses risk-based parameters to determine inspection review areas, as well as safety significance components. The underlying concern here is, that these high-risk categories may not by themselves be sufficient to determine accident risk, accident scenarios, and safety importance. Low-risk components, scenarios, and sequences must also be factored into the ROP process because they are the ones that will most likely contribute to the next accident because of their frequency of occurrence and inattention by ROP.

   An accumulation of low-risk parameters are capable of synergism and cause a serious incident or accident. It is therefore not inconceivable for a nuclear accident to be initiated by a sequence or combination of low-risk events that are individually considered low-to-no-risk, and therefore inconsequential. Two examples are provided below where a number of low-risk parameters came together to cause major catastrophes. It is interesting to note that in retrospect, had these accumulations of low-risk inactions been collectively analyzed through PRA methodology, they probably would have raised a flag – but this is unfortunately not part of the ROP today.

   a. The Columbia Space Shuttle accident was initiated by two events that had been categorized as low-risk. The first, loss of foam, had been determined by NASA to be a maintenance related item with low-to-no flight risk, and NASA had stated for years, with unwavering conviction, that foam strikes to the space shuttle presented low-to-no flight risk. The second, loss of the thermal protection system, also a routine flight occurrence, had also been categorized as an acceptable low risk event. However, the combination of these two low-risk events, where foam pieces struck and removed the thermal protection tiles was the undoing of Columbia.

   b. The recent Comair airline crash, where the pilots took off from the wrong runway, was caused by a combination of relatively low-risk human errors.

No individual occurrence by itself could fall into the category of being high-risk. The low-risk human actions and inactions leading up the Comair accident were:

- The pilots were not given clear alerts on recent changes to runway reconfiguration and access requirements.
- Both pilots did not visually recognize that they were on the wrong runway.
- Both pilots failed to observe that their instruments indicated that they were aligned to the wrong compass heading for take-off.
- Only one of two air traffic controllers was on duty.
- The one air traffic controller on duty was overworked, and thereby did not to observe that the aircraft was on the wrong runway.
- And finally, both runways were poorly marked, and poorly lit.

The point should be clear – low risk components should not be summarily dismissed from consideration as inconsequential; they may become significant factors leading to accidents through synergism, and therefore should be made part of ROP.

2. A potential finding may be identified where the design and licensing basis had not been implemented; however, the SER written by the NRC when the plant was licensed, stated directly or indirectly, that the subject of contention was reviewed and found to be acceptable. Both licensees and the NRC have used this argument on numerous occasions as valid grounds for not pursuing and correcting an issue of potential safety significance.

   The licensee has ultimate responsibility for implementing their design and licensing basis, and if errors or omissions are subsequently identified in the implementation of the design basis, the licensee has an obligation to correct them irrespective of what the SER may or may not say. The ROP must acknowledge that the original SER may be have been flawed.

3. Findings of no color are frequently reported to the licensee but are not documented in the inspection report. These findings are basically left to the licensee's discretion (and integrity) for follow-up. The licensee usually writes a condition report, but is not obligated to take any corrective action if the condition report does not call for it. Therefore, an issue identified by the NRC may be disregarded entirely by the licensee based on inappropriate or unsound conclusions. The fact that these findings of no color are not undocumented, nor tracked or trended by the NRC, is a significant weakness in the ROP.

4. On identifying a finding, it is frequently noted by licensees that other nuclear plants have identical or similar design shortcomings; on this basis the finding is identified as an industry-wide generic issue, and is often not pursued further by the NRC.

5. An issue of concern that had been brought up numerous times during past inspections is dropped because it is determined not to be cost-effective to pursue once again.

Past reviews do not necessarily make a problem go away, it remains a problem until corrected and closed. It is possible that the past reviews were not rigorous, or perhaps they were not presented with the required technical clarity to identify the safety significance.

6. Findings are sometimes dismissed from further consideration based on the conclusion that by making the licensee correct the shortcoming, this would constitute a backfit.

   Examples have arisen where a licensee failure to comply with their own design basis has been termed a backfit issue, and dropped from further consideration.

Some of these pre-conceived and pre-existing roadblocks, and mind-sets, have existed for many years and therefore may be difficult to overcome; however, the ROP process should provide specific direction and guidance in these areas in order to make the process more effective in accomplishing its objective and ensuring the safety of nuclear power plants.

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