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April 12, 2001

Mr. David L. Meyer
Chief, Rules and Directives Branch
Division of Administrative Services
Mail Stop: T6-D59
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Mr. Meyer:

NUCLEAR REGULATORY COMMISSION (NRC) - REQUEST FOR PUBLIC COMMENTS ON THE FIRST YEAR OF IMPLEMENTATION OF THE REACTOR OVERSIGHT PROCESS (VOL. 65 *FEDERAL REGISTER* 241)

TVA appreciates the opportunity to comment on the implementation of the Reactor Oversight Process (ROP) as published in the *Federal Register* on December 14, 2000. In general, TVA feels that the revised oversight process with its performance indictors and significance determination process is a much improved process that provides a more risk-focused and consistent oversight of the commercial nuclear power industry.

Enclosure 1 provides specific comments and suggestions relating to the first year of implementation of the revised ROP. Enclosure 2 provides TVA's response to the questions asked in the above referenced *Federal Register.*

If you have any questions, please contact Susan Ferrell at (423) 751-7737.

Sincerely,

Mark J. Burzynski
Manager
Nuclear Licensing

Enclosure
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ENCLOSURE 1

1. The design of the new Reactor Oversight Process (ROP) (i.e., performance indicators (PIs), inspection finding evaluations, and NRC action matrix) provides more timely and actionable feedback than the Systematic Assessment of Licensee Performance (SALP) process. The new format for inspection reports and exit meetings focus issues better and is more objective than the old format.

2. The area of safety-conscious work environment in the Problem Identification and Resolution (PI&R) inspection module is one area where subjective judgments are still being made. The current practice of using regional inspectors to conduct random interviews of a few licensee employees does not provide an appropriate sample. In addition, the inspectors lack training in the skills needed to recognize, interpret, and respond to interviewee reactions. Because of these deficiencies, conclusions about a safety-conscious work environment might be incorrect.

3. NRC management needs to continue to encourage their inspectors to provide informal feedback of minor issues. This feedback is a source of very valuable third-party insight on licensee performance. The feedback allows the licensee to integrate and act on these observations to improve performance without having to track them in lower threshold feedback systems. By no longer documenting these issues as observations, considerable regulatory burden will be saved with little to no decline in regulatory effectiveness.

4. The format for annual meetings provides more objective feedback with less chance of unexpected new issues being raised for the first time. Several participants at the recent Lessons Learned Workshop proposed that for a licensee with all green PIs and inspection findings that the annual meeting not be held or that a scaled-down version be considered. TVA believes that this meeting also serves the very important purpose of briefing the public on the performance of the licensee and provides a good opportunity to influence the confidence of the public. Both the licensee and the NRC needs to put forth additional effort in these annual meetings to ensure that state and local officials are receiving sufficient feedback regarding plant performance. TVA also agrees with NRC's opinion, expressed during the March 26-28, 2001 ROP Lessons Learned Workshop, that inspectors should provide the nexus between their comments and the underlying regulatory requirement.

5. If maintaining safety is one of the goals of this process than an "all green board" is the desired outcome. PI threshold changes to "grade on a bell-curve" are not the appropriate way to achieve stable and effective regulation of a mature industry.

ENCLOSURE 2

Part I - Questions related to the efficacy of the overall process:

1. Does the Reactor Oversight Process (ROP) provide adequate assurance that plants are being operated safely?

   Yes. However, with the implementation of the revised ROP and its baseline inspection scope being primarily the responsibility of the site resident inspectors, the availability of the resident inspectors has become somewhat restricted at several of our sites. They are no longer able to attend daily site meetings and corrective action program management review meetings on a routine basis. These meetings address the day-to-day activities planned at the facility and provide valuable insight on the managing of daily operations at the facility and on the emphasis of management on problem identification, analyses, and repair at the facility. These meetings are probably the best source for capturing the health of the safety-conscious work environment of a specific site. The inspectors must now capture these insights through the time-consuming and less effective inspection and interview processes.

2. Does the ROP provide sufficient regulatory attention to utilities with performance problems?

   Early analysis of the causes of violations and findings issued under the ROP seem to support the underlying assumption that an ineffective corrective action program will lead to declining performance that can be seen in non-green PIs and findings. Licensees that have a higher than industry average number of findings tying to human performance or corrective action program deficiencies are also receiving greater than the average number of non-green findings and PIs. They are subsequently migrating to the left side of the action matrix, out of the licensee response column. The migration into the regulatory response or degraded cornerstone columns of the action matrix is resulting in the appropriate increased regulatory attention.

   The process does, however, have the opportunity for subjectivity on the part of NRC. The treatment of multiple low significance finding across various cornerstones to demonstrate a cross-cutting higher significance programmatic breakdown can be very subjective. The current inspection guidance lacks details on the specific number of findings needed to demonstrate an adverse trend. This lack of clarity results in inconsistencies in reporting within the NRC. There are examples where only two or three very low significance findings were used to demonstrate a "more significant programmatic breakdown." The initiation of a follow-up inspection of a programmatic breakdown developed under this very subjective definition can result in an inappropriate diversion of regulatory resources and management attention from other more valid risk-significant needs. To prevent the propagation of subjective trend interpretations, additional clarification is needed

on the number of examples required to constitute an adverse trend. Additional clarification should also be issued on a reasonable time allowance for a licensee to resolve a finding before a valid repetitive example is cited.

3. Does the ROP reduce unnecessary regulatory burden on licensees?

   For facilities that were SALP 1, the regulatory burden has increased due to the additional inspections required to meet the baseline level. With the additional burden of the performance indicator data collection and verification, TVA realized little to no reduction in regulatory burden at our facilities. However, it is apparent from discussions with other licensees that the goal of an overall regulatory burden reduction was achieved when a comparison is made across the industry as a whole.

   For single-unit facilities, the ROP calls for more than one resident inspector as the minimum staffing. A multi-unit facility usually has one per unit. This practice provides an uneven routine inspection burden and associated licensee fees for a single-unit facility. In addition, the practice to date has been to use standard week-long baseline inspections for single-unit facilities. This places an additional burden on single-unit facilities that is not consistent with multi-unit facilities and further impacts the per unit cost for single unit facilities. By definition, the risk to the public for a single-unit facility is approximately half that of a dual-unit facility. The ROP does not adequately consider the dissimilar risks. NRC should consider additional options to provide back-up coverage using inspectors assigned to nearby multi-unit sites.

4. Does the ROP improve efficiency, effectiveness, and realism of the regulatory process, focusing NRC resources on those issues with the most safety significance?

   Overall, the revised ROP achieved the goal of improved efficiency and focus of regulatory resources. In the reactor safety area, which uses PIs for initiating events and mitigating system and the reactor safety Significant Determination Process (SDP) to determine the safety significance of issues, TVA has observed very appropriate regulatory responses. This is not the case for issues identified in the nonreactor safety cornerstones where less risk-based PIs and SDPs exist. The revised security SDP has helped in developing a more appropriate response to security issues, but additional improvement is needed in these cornerstones.

5. Has the public information associated with the ROP been appropriate to keep public informed, in a timely and understandable fashion, of NRC activities related to plant safety?

   The revised ROP and associated NRC web pages have come a long way in simplifying the process and providing timely and understandable information on the performance of licensees to interested stakeholders. As evident by the comments received from public stakeholders on the Initial Implementation Evaluation Panel, additional simplification and improvements can still be made.

6. Does the ROP increase the predictability, consistency, clarity and objectivity of the NRC's oversight activities?

   During the limited observation period afforded by the first year of implementation, TVA observed an increase in the predictability and objectivity of the NRC oversight. However, as will be discussed in the following response to question II.3, improvement is still needed in the areas of emergency planning, fire protection, and security.

7. Has the public been afforded adequate opportunity to provide input/comments and involvement in the ROP development process?

   Yes, the regions and headquarters sought comments on the process and improvement suggestions on ample formal and informal occasions.

8. Has NRC been responsive to input/comments provided by the public regarding the ROP development process?

   Yes. The FAQ process has provided a timely and responsive mechanism for licensees to ask questions about the implementation of the PIs. While a formal process has not existed, the regional administration was always responsive to questions on implementation of the SDP and inspection process.

Part II- Questions related to specific ROP program areas:

1. Do PIs or other aspects of the ROP create unintended consequences?

   TVA has not noted any unintended consequences.

   TVA is aware of industry discussions of the susceptibility of the unplanned power change PI to manipulations by the licensee. While this PI is perceived as susceptible to manipulation, neither the public nor the regulators have provided actual tangible examples of its manipulation by a licensee. It is easy for an impression of manipulation to be perceived by outsiders who might observe the discussions and planning for a power change. It is likely that the discussion will include an assessment of the impact that a load reduction might have on a PI. However, it is not reasonable to assume that it was a key factor in any decision just because it was discussed. It is both sensible and prudent for licensees to discuss the pros and cons of making an unplanned power change as part of a healthy decision making process. There is some inherent risk in making an unplanned power change that must be balanced by the benefits expected to be obtained.

   One area susceptible to unintended consequences is the current treatment of estimated fault exposure time (t/2 time). Experiences during the first year of implementation have shown that it can arbitrarily raise the regulatory significance of

certain issues. TVA believes that estimated fault exposure time should be removed from the PIs. The underlying problem can be more consistently evaluated through the SDP.

2. Do any aspects of the ROP inappropriately increase regulatory burden?

   There appears to have been an inappropriate increase in inspection in the radiation protection area despite the creation of PIs that monitor licensee performance in this area. As presented by NEI at the ROP Lessons Learned Workshop held March 26-28, 2001 in Gaithersburg, Maryland, the actual planned number of inspections hours in the area has almost doubled from the pre-PI revised ROP inspection hours. There appears to have been little or no inspection reduction credit given to the industry for the PI data that is being submitted. The increased inspection, coupled with the all green status of these PIs, has resulted in an unnecessary increase in regulatory burden.

   Inspection resource utilization could be improved through optimizing the inspection program. With the merging of many licensees into larger multi-site companies that share common programs and procedures, efficiency will be gained by combining programmatic inspections. A single inspection can review a common program used by multiple sites. This common inspection will reduce the inspection resources and the fees billed to a licensee while still providing adequate assurance of the program's wellness.

   The frequency of several of the baseline inspections should also be examined. Specifically, the PI&R module might be better performed on a bi-annual versus an annual frequency. On a high performing site, few significant event root cause analyses are available in a single year duration to support an adequate assessment of a program's wellness. While at a degraded cornerstone facility, a once a year duration might not provide adequate time for program enhancing corrective actions to take hold between inspections. The NRC should take into consideration that a corrective action program is more than a set of procedures. It is how hundreds of individuals approach the identification and resolution of problems. Thus, as with most cultural elements, changes are often slow because it requires modifying the behavior of a large number of individuals. TVA recommends the use of routine oversight activities of the resident inspectors as a barometer of day-to-day program performance. Declining performance does not occur overnight. It is this factor that should permit the NRC to extend inspection frequency once an acceptable level is achieved. Additionally, declining performance will manifest in certain areas first. Therefore, a two-year frequency that could be adjusted to a once a year frequency, should a cornerstone get degraded, seems more appropriate.

   Also, the frequency of the Safety System Design Inspection might be better coordinated with a refueling outage cycle. Since most of the significant major modifications are implemented during refueling outages, inspection that lags an outage by a few months might be more appropriate.

3. Is the SDP usable and does it produce consistent and accurate results?

   Yes. The reactor safety SDP produces consistent and accurate results. NRC management needs to place priority on the completion of Phase II screening sheets to make the SDP an efficient and fully implementable product. While the emergency preparedness, radiation protection, and security SDPs are not truly risk-based, they offer significantly more consistency to the process when compared to the pre-SDP inspection process. Also, it is not clear how the NRC evaluates the risk significance of shutdown conditions. This topic should be covered in a future workshop.

   The fire SDP is complex and time consuming. Experience has shown that it also leads to inconsistent results.

   In the area of the ALARA SDP, we have the following specific concerns:

   - it utilizes specific numerical criteria that are not addressed in the current regulations and appears to be setting a new regulatory expectation standard that exceeds that in the regulations,
   - it does not use the current three-year average data for site exposure,
   - it appears to confuse performance with risk significance,
   - it fails to adequately define key parameters such as job and estimate which leads to inconsistent implementation, and
   - it results in implications that appear to go beyond current regulations.

   Our experiences at Sequoyah Nuclear Plant have pointed out the need to understand the condition core damage probability concept and the new NRC decision-making framework. We would encourage NRC to finalize Management Directive 8.3 and that it be considered as a topic for a future workshop.

   Additionally, the proposed SDP for determining significance of Maintenance Rule (a)(4) performance issues, as currently crafted, would not screen any performance issues. It bins items according to incremental core damage probability (ICDP) categories, but it colors every item. NRC should consider, if it is concluded that a specific Maintenance Rule SDP is needed, how to best identify what would be considered minor and provide screening criteria. An approach more consistent with the reactor safety SDP might be best considered. Maintenance Rule does not currently require computation of ICDP. Therefore, NRC would have to determine the value for licensees that do not compute it. This would seem an unnecessary expenditure.

4. Are there areas of unnecessary overlap between the inspection program and the performance indicators?

   As discussed in the response to question 2 above, some overlap exists between the PIs and baseline inspections of PI&R and radiation protection. TVA recommends that the baseline inspection program frequency be relaxed in these (and potentially

other areas) where little fruit or program change is being observed at the current inspection frequency.

5. Does the ROP assessment program provide timely, consistent, and relevant assessment information?

   Yes. The revised ROP process has afforded a timely, consistent, and predictable response to events and issues that have arisen over the last year. With the use of the action matrix, the licensee is able to predict the regulator's response to a threshold boundary change on a PI or to a color finding. The use and availability of the SDPs have allowed the licensee to better predict the outcome of an issue or event and to anticipate and help support the regulator's informational needs when investigating a plant event. The inspection reports, even though they are issued on a quarterly basis, provide timely and relevant supporting information that is largely consistent with the anticipated outcomes from exit meetings and follow-up discussions with the inspectors.

6. Has the NRC implemented the ROP as defined by program documents?

   As a general rule, the Regions are implementing the program as defined. However, with the evolving and improving nature of the first year of implementation, the NRC implemented many changes in the inspection arena during an active cycle of industry inspection. Additionally, many SDPs were still under development as inspectors were conducting inspections and analyzing issues. While this has resulted in some consternation by both the licensee and the regulator on several occasions, it has not poised any significant impedance to the implementation of the process. The appearance of consistency differences between similar inspections performed at different locations was not a major stumbling stone in the program implementation.

   The guidance in Manual Chapter 610* provides clear criteria for thresholds and reporting. While there are anecdotal examples of inspectors inconsistently following the ROP inspection documentation guidance, within NRC Region II the guidance is being followed for the most part. NRC management expectations need to be continually reinforced until it consistent application becomes the norm across all the regions.

   A specific inconsistency example of MC 610* criteria might be found in the area of licensee identified violations (LIVs). LIVs that are the subject of licensee event reports (LERs) are being consistently discussed and closed in inspection reports. The inconsistency comes with how residents are handling the balance of the LIVs that are included in the licensees' corrective action program, but do not require an LER. In some cases inspectors list LIVs in inspection reports under the discussion of corrective action program issues while others do not list them. A revision to MC 610* is needed to provide additional detail on when and how LIVs are to be documented in inspection reports.