



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

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Chief, Rules and Directives Branch  
Division of Administrative Services  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Gentlemen:

NUCLEAR REGULATORY COMMISSION (NRC) - RISK-BASED PERFORMANCE  
INDICATORS: RESULTS OF PHASE 1 DEVELOPMENT (VOL. 66 *FEDERAL REGISTER* 22)

TVA appreciates the opportunity to comment on the subject draft report published in the *Federal Register* on February 1, 2001. TVA supports NRC's continuing efforts to improve the performance indicators. We also recognize the challenge in developing effective risk-based performance indicators without adding unnecessary burden. In general, the indicators proposed in this draft report would probably result in only a nominal improvement in the predictive or assessment capability over the current indicators used in the reactor oversight process. However, we believe that adopting such a set of indicators would result in a significant increase in the data collection and verification burden imposed on the licensee.

The enclosure provides specific comments and suggestions relating to the phase 1 report.

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

Sincerely,

*Ralph H. Shell*

for Mark J. Burzynski  
Manager  
Nuclear Licensing

Enclosure

cc (Enclosure):

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## ENCLOSURE

1. Assuming that system reliability would be monitored as a separate indicator than availability, the proposed list of risk-based performance indicators (PIs) would number between 20 and 25 versus the current number of 11 for the three safety cornerstones addressed in this phase of the study. The collection and verification of the data elements for the proposed number of PIs would result in significant additional burden on the licensee. How this additional burden will be compensated for in reduced baseline inspection has not been addressed.
2. Support of the reliability indicators would require data collection of component failures currently beyond that being done for the current PIs. In addition, this collection effort will be beyond the data currently being collected for maintenance rule for several of the proposed systems. If the PIs are to be true measures of reliability that relates the number of failures to the number of actual demands, an even more significant increase in the data collection requirements of licensees would result. For many of the components being considered for reliability monitors, especially for air- and motor-operated valves, the demand component of the calculation is not readily obtainable, and significant new data calculation procedures would have to be developed to collect this information.

If the reliability indicators were to only track the number of failures (as is currently being done for safety system functional failures), thresholds set based on acceptable risk levels would have to be very site-specific considering the design of the system as well as the accident impact of a specific components failure. This would result in increased issues with uneven playing fields between sites and be a source of additional confusion to our public stakeholders.

3. With the significant differences in plant design, the development of a consistent scope definition of the PIs for air-operated valves, motor-operated valves, and motor-driven pumps will be a substantial challenge. The concern of ensuring an even playing field would likely require the calculation formula to contain a normalizing factor or the use of a variety of thresholds. This would add significant complexity to the additional confusion for our public stakeholders who try to compare performance between sites.
4. The shutdown monitor of time in high/medium/low-risk significant configurations would be a lagging indicator. It would take several refueling outages to obtain a notable trend for a licensee or site, if at all possible. On the other hand, the high/medium/low conditions are very dependent on the specific outage work plan and would likely change significantly from one outage to the next. This information could be easily captured in an outage inspection module and compared across the industry annually as an industry norm and trend. This would provide more timely feedback to specific licensees that are outliers.

5. The monitoring of actual fire suppression system availability and reliability would be extremely burdensome. The definition of unavailable would be very complex and subject to considerable controversy. With the extreme variety between licensees on the methods and designs used to provide fire suppression, an even playing field would be nearly impossible to achieve. System performance might be bettered monitored in a manner similar to how security is currently being monitored with the hours in compensatory fire watches for an out of service sector of suppression being the desired comparison component between licensees. While not a true availability or reliability, the use of this type of monitor for security has successfully raised licensee awareness of the system status and performance.