

January 5, 1995

MEMORANDUM TO: William T. Russell, Director  
Office of Nuclear Reactor Regulation

FROM: Stewart D. Ebnetter, Regional Administrator (Original signed by S. Ebnetter)

SUBJECT: SEQUOYAH INTEGRATED PERFORMANCE ASSESSMENT PROCESS  
PHASE IV - ASSESSMENT OF REGULATORY PROGRAMS

An Integrated Performance Assessment Process (IPAP) evaluation was performed for the Sequoyah Nuclear Power Plant between October 30 to December 21, 1995. The results of the integrated assessment were consistent with our prior understanding of licensee performance at Sequoyah. The regulatory program, as implemented at Sequoyah, was found to be satisfactory but, several opportunities for improvement were identified. These opportunities for improvement are addressed in the general comments provided as Attachment 1 and in the answers to MC 93808 questions provided in Attachment 2.

The inspection guidance provided by MC 93808 was good although we believe some enhancements can be made. In particular, we suggest that the guidance be amended to focus inspection on the last six months of licensee performance and to require trend analysis. This focus on recent performance and trend analysis is important for planning future inspections.

Most of the comments in the attachments relate to Regional implementation of the inspection program including the IPAP process. Although we found our implementation to be satisfactory, several opportunities for improvement were identified. Opportunities for improvement were especially evident for improving the quality of inspection reports and the effectiveness of inspections in the areas of self-assessment and corrective actions.

This completes Phase IV of the Sequoyah IPAP.

Attachments: As Stated

cc w/atts: R. W. Borchardt, NRR/DISP/PIPB  
S. Stein, NRR

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SUBJECT: SEQUOYAH INTEGRATED PERFORMANCE ASSESSMENT PROCESS  
PHASE IV - ASSESSMENT OF REGULATORY PROGRAMS

An Integrated Performance Assessment Process (IPAP) evaluation was performed for the Sequoyah Nuclear Power Plant between October 30 to December 21, 1995. The IPAP team determined that inspection reports in the docket provided a good assessment of licensee performance with the exception that positive licensee performance aspects were not usually described in much detail. The overall quality of the inspection reports was judged to be good. The team noted some documentation improvements that could be made. Those observations are included in the Attachments 1 and 2.

The total amount of resources committed to this IPAP exceeded those identified in MC 93808. Phases I, II and III of this IPAP were completed well within the six week time guideline identified in MC 93808. However, MC 93808 establishes a minimum of 14 days for the licensee to review the Phase I report, but does not provide time for team activities during the time the licensee is reviewing that Phase I report. Since 14 days are insufficient for a region based inspector to prepare for, perform and document an inspection at a different licensee site, the region based IPAP team inspectors used that time to review collected licensee documents and develop inspection plans for the subsequent IPAP onsite inspection. Consequently, the three region based inspectors were fully committed to this IPAP effort for a period of eight weeks - not the six weeks identified in MC 93808. The Senior Resident Inspector assigned to this IPAP returned to his home site and devoted only a small amount of additional time to continued IPAP preparations.

As part of Phase IV, the team developed comments on the process. Attachment 1 provides a regulatory program assessment and general comments. Attachment 2 provides answers to the questions specifically identified in MC 93808.

This completes Phase IV of the Sequoyah IPAP.

Attachments: As Stated

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S. Stein, NRR

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## REGULATORY ASSESSMENT AND GENERAL COMMENTS

### 1. Regulatory Program Concerns

The following Regulatory Program Concerns are regional implementation issues that are being evaluated by regional management to determine the actions appropriate to resolve the issue.

#### General Concern

Most reports on the docket focus on licensee weaknesses and regulatory aspects of observed problems. Very little information is provided in the docket on licensee's positive attributes. Consequently, it is difficult to reach an accurate rating of licensee performance in Phase I when the basic documents focus mostly on weaknesses.

#### Self Assessment/Corrective Action Area

Although portions of the program were evaluated by the Resident Inspectors under MC 40500, there was no integrated evaluation of the effectiveness of the site Corrective Action System (e.g., effectiveness of root cause analysis program) on the docket. The initial information available to the IPAP team during the docket review for this area was predominately associated with PORC meetings for post trip reviews, Notices of Violations against 10 CFR 50 Appendix B, Criterion 16, "Corrective Actions", NRC observations of SQN senior management meetings, public meetings between NRC and the licensee, licensee documents and the recurring problems that continued to be manifested by site events.

#### Operations Area

There were no specific regulatory program concerns identified by the team in this area. Information in the docket was extensive, especially in the Resident Inspector's reports.

Independent observations and conclusions drawn by the IPAP team were generally consistent with those of the Resident staff.

The Sequoyah site continues to have frequent issues that require attention from the resident staff. The number of issues at the site during the IPAP onsite inspection kept the resident staff extremely busy. These multiple issues decrease the ability of the resident inspectors to plan and perform detailed inspections in areas other than the emerging issues.

#### Engineering Area

No specific regulatory program concerns were identified in this area. Information in the docket related to Engineering was contained in the Resident Inspector's report and several region based specialist reports. In most cases, information was rather limited and usually focused on a narrow technical issue of interest. Some special team inspections provided useful insights into the adequacy of Engineering processes.

Onsite observations by the IPAP team were used to evaluate performance of the System and Component Engineering groups (within Site Engineering) during their activities to support plant restart. The Design area of Engineering was the most difficult area to accurately assess from the docket and during the site inspection because this group was not highly active in day-to-day support to the plant. The IPAP assessment could sample only a small number of design output documents and some Engineering internal performance indicators.

#### Maintenance Area

This is an area of regulatory program concern. There was limited broad based assessment of the adequacy of Maintenance activities at Sequoyah in the docket. Much of the information on the docket came from the Resident Inspector's reports and was usually very narrowly focused. Region based inspections were also very narrowly focused on specific technical issues.

#### Plant Support Area

There were no specific regulatory program concerns in any of the Plant Support areas. Improvement in the documentation of details in the Physical Security reports would have helped the IPAP team better substantiate Phase I ratings.

## 2. Module Content

- a. Module 93808 frequently refers to a review period of two years for the Phase I docket review. Such a lengthy evaluation period can be misleading if licensee performance is rapidly changing. Also, two years can encompass portions of two successive SALP periods - one already evaluated and one being evaluated.

#### Recommendation:

To develop a licensee assessment that best represents current performance, the Phase I assessment should be based on the most recent six months of licensee performance. Earlier docket material should be used only for trend purposes.

- b. This IPAP's review of the Plant Support area was not as in-depth as the other areas. The extensiveness of the Plant Support area limited the assigned IPAP inspector's time in any one area. Also, current Plant Support inspectors lack broad based knowledge sufficient to do in-depth inspections of Rad Con, Chemistry, Emergency Preparedness, and Physical Security.

(It is recognized there is no easy solution to assure the areas in Plant Support get a good review while maintaining a small IPAP team. The recommendation below is only one of many options possible. It was selected because it focuses on the most safety significant plant support area.)

Recommendation:

Limit onsite reviews in the Plant Support area to Rad Con and Chemistry only. Perform no onsite validation of the other areas unless an area has been functioning at a SALP 3 level. Then, add a specialist from that area to the team.

- c. In assigning future inspection resources, licensee performance trends can be more important than the absolute level of performance in an area.

Recommendation:

Revise MC 93808 to direct consideration of recent trends in performance to establish resource recommendations.

The following item is a regional implementation issue:

- d. The two week Phase I schedule should consist of one week of docket review and one week of integration of findings, report preparation and management briefings. For special circumstances where the docket is large, additional time should be added for docket review. However, a minimum of one week is essential for the remainder of the Phase I effort. If insufficient time is allotted in Phase I, the Phase I integration effort could be sacrificed to meet the schedule to get the Phase I report to the licensee well before the onsite review.

Recommendation:

Consider limiting the Phase I review to the number of reports that can be reviewed in a week or, if the docket is large, increase the in-office review time.

### 3. Team Members

The following five items are regional implementation issues:

- a. The area of Self-Assessment/Corrective Action is very important. Assigning a portion of this area to each of the team members is only partially effective and the Team Leader is left to pull the whole area together.

Recommendation:

Add a specific inspector to evaluate the Self-Assessment/Corrective Action area. If an area is rated as superior based on the Phase I review, consider not doing an onsite validation of that area to minimize team resources.

- b. Team members should be assigned full time to the IPAP Team for the duration of the IPAP process. Use of team members for other activities during any of the phases slows up the entire team because integration activities can't proceed until all team members have finished their individual assignments.

Recommendation:

IPAP inspectors should not be assigned additional duties until they are released from the IPAP unless there is some extreme need for a specific inspector.

- c. The Team Leader and team members should be assigned to IPAP inspections as soon as possible after the IPAP sites are selected to allow schedule changes to be made to accommodate these assignments.

Recommendation:

Schedule team members as soon as possible after the decision is made to do the IPAPs at a particular site.

- d. The Team leader should be assigned to the team full time at least two to three weeks prior to the start of the in-office docket review to assure all final preparations are complete and requested licensee material is available.

Recommendation:

Schedule the Team Leader to be assigned full time to the team no later than two weeks before the in-office review is to begin.

- e. The Team Leader should not be assigned to review any specific areas. The Team Leader duties should be team oversight and direction, and communications with licensee management.

Recommendation:

Clearly define the Team Leader's role as discussed above.

#### 4. Schedule

The following items are regional implementation issues:

- a. Completing the entire IPAP process within three, two-week intervals is a very aggressive schedule. Even with dedicated inspectors, limiting Phase I to two weeks does not leave enough time to do good Phase I integration, review licensee provided documents and develop inspection plans for the onsite effort. A two week onsite assessment is sufficient. Also, a two week Phase III is sufficient once a final report format has been established.

Once the IPAP process is started, every effort should be made to complete it in as short a time as possible. This helps the team members keep their focus and helps the integration process because information is not clouded with other extraneous, unrelated material. The two weeks onsite should be continuous instead of breaking them up with a week back in the office.

MC 93808 establishes a minimum of 14 days for the licensee to review the Phase I report but does not address team activities during that time. A 14 day period of time is insufficient for a

region based inspector to prepare for, perform and document an inspection at another licensee. In addition, trying to do another inspection significantly reduces the inspector's ability to maintain his focus on the information developed during Phase I of the IPAP. This would likely result in a reduction in efficiency of the onsite effort.

**Recommendation:**

Limit licensee Phase I report review time to no more than 14 days and continue IPAP activities during the time the licensee is reviewing the Phase I report.

- b. Developing a schedule well in advance for an IPAP is essential for planning for coverage at the home site of any resident inspector assigned to a team. The team resident will likely be away from home for six weeks in an eight week period.

During the fourth quarter of the year, IPAP activities should be scheduled carefully because of a? ? the holidays.

**Recommendation:**

Do early planning and scheduling of all team members.

## 5. Report Format

- a. The Preliminary and Final reports issued for previous IPAPs do not have a common format or content. Some consistency would be desirable.

**Recommendation:**

Establish report formats in MC 93808.

- b. Use of color coding is superfluous since color coded charts are not really used in the reports.

**Recommendation:**

Modify MC 93808 to eliminate the color coding.

## 6. Performance Based Inspection

The following item is a regional implementation issue:

This IPAP focused on doing performance based inspections. However, this effort would have been very difficult had the Sequoyah units not experienced a significant number of issues that permitted the team to do direct observations of work efforts.

**Recommendation:**

Schedule IPAPs during times when licensees are conducting outages or during other periods of high activity.

## 7. Integration Methods

Integration of information during the Phase I evaluation is important but approaches to it are not well defined. Currently, each team must bootstrap it's way through the process.

### Recommendation:

Based on the IPAPs completed to date, develop some integration strategies that might be used by future teams to integrate Phase I inspection findings. Provide them to future team members and add them to MC 93808.



## ANSWERS TO SPECIFIC MODULE 93808 QUESTIONS

### A. Were issues identified that were not previously recognized?

There were no new issues identified during the docket review that were not previously known before the IPAP docket review began. Also, the onsite review, in most cases, validated the information in the docket.

During the onsite review, there were no new issues identified in the Plant Support area. However, several new issues were identified in the other areas during the onsite review. These were:

#### Program Issue:

1. The overall area of Maintenance was rated by the team to be good and is consistent with the current regional management assessment of this licensee's performance. However, on the final Planning Tree, the Quality of Maintenance area was changed to "adequate" from "good" originally established by docket review due a recent trend of increasing personnel performance problems observed onsite by the team. The team observations were consistent with recent licensee observed negative trends in this area.

#### Specific Technical Issues:

While the following specific issues are new, they are not inconsistent with what might be expected based on the region's understanding of current licensee performance. Overall, they indicate continued licensee improvements are needed.

1. Some operators were not following station procedures for "continuous use" procedures and control room managers were not exercising strong reactivity management oversight and control. The procedure use issue was turned over to the Residents for potential enforcement.
2. There were about 300 plant deficiency tags in the Unit 1, Unit 2 and Common control room with no assessment of synergistic effects.
3. Several additional operator work-arounds were identified by the IPAP team that operators were not aware of.
4. The number of operator work-arounds and Engineering's lack of being proactive in their efforts to resolve these issues had not been covered in a lot of detail in the docketed information.
5. A potential enforcement issue was identified and turned over to the Residents concerning failure to follow procedure/inadequate procedure during annunciator troubleshooting which resulted in a primary system transient due to improper jumper installation. Complicating this event was the fact that a potential fuse/breaker coordination problem existed when, during the circuit fault from the jumper, the module fuse did not clear the fault and the breaker for the rack opened. Later information received after the IPAP onsite phase determined that the module fuse was oversized.

6. The MAMS inventory database had incorrect end use information for Westinghouse 480 V DS circuit breaker operating mechanisms. The database indicated that operating mechanisms for DS 416 breakers could be used for DS 532 breakers. Discussions with the vendor and component engineering determined that DS 416 operating mechanisms should not be used in DS 532 breakers. Later information received after the onsite phase of the IPAP determined that incorrect parts due to this database error did lead the licensee to identify one nonsafety related breaker DS 532 with the incorrect operating mechanism installed. This issue was also turned over to the Residents for potential enforcement action.
7. Generally, there were weaknesses noted in the licensee MAMS and EMS databases which contributed to problems accomplishing maintenance.

**B. Was the inspection record complete and accurate?**

The docket was generally complete and accurate. However, very little detail existed in the docket material regarding positive licensee performance. There tended to be much more detail regarding the aspects of noted weaknesses. This made it hard to develop accurate Phase I ratings. There were also some findings which were identified and docketed during the period that were the result of licensee actions which occurred prior to the period of interest to the IPAP. The actual time frame of the licensee actions was not identified in the docket.

Safeguards reports were generally less detailed than reports from other Plant Support areas. This made it difficult to draw preliminary conclusions about the plant's Physical Security performance.

**C. Were inspection reports from the divisions of reactor projects and reactor safety consistent in their characterization of performance?**

Generally, the reports from DRP and DRS were consistent in the Operations, Engineering, Maintenance and Plant Support areas. However, as noted earlier, most did not contain positive assessments. Also, some did not contain appropriate assessments of performance.

The site integration matrix provided good tracking of issues in all areas.

**D. Were inspections that followed up on issues complete and sufficiently detailed to justify closure of the issues?**

Actions taken to close issues were sufficiently complete to justify closure and sufficiently documented to understand the basis for closure.

**E. Were inspection reports of good quality and in accordance with requirements?**

The inspection reports reviewed were of good quality and usually provided a good assessment of licensee performance. This is evidenced

by the relatively few changes between the IPAP phase I and phase II assessments.

**F. Were enforcement actions appropriate and in accordance with requirements?**

For the issues reviewed, enforcement actions taken were appropriate and in accordance with requirements.