UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

Report Nos.: 50-327/94-31 and 50-328/94-31

Licensee: Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Docket Nos.: 50-327 and 50-328 License Nos.: DPR-77 and DPR-79

Facility Name: Sequoyah Nuclear Plant Units 1 and 2

Inspection Conducted: September 19-23, 1994

Inspector: McKenzie Thomas 10-20-94
M. Thomas Date Signed

Approved by: C. Casto 10/20/94
C. Casto, Chief Date Signed
Test Programs Section
Engineering Branch
Division of

SUMMARY

Scope:

This routine, announced inspection was conducted in the areas of engineering and technical support activities and the status of Site Improvement Plan (SIP) activities.

Results:

In the areas inspected, violations or deviations were not identified.

- Current staffing levels (including the additional resources to address the engineering backlogs) were adequate to perform their assigned duties and responsibilities. (Section 2.a.)

- Other plant departments were cognizant of their responsibilities for the applicable programs and activities that were transferred to them after the Technical Programs and Performance group was eliminated. There were some questions regarding responsibility for the Environmental Qualification (EQ) Program within the Site Engineering Department. (Section 2.b.)

Enclosure

- The reclassification of some drawings from Category 3 to Category 2 resulted in a backlog of Category 2 drawings. (Section 2.c.)

- The process by which engineering received and prioritized work requests and work orders for resolution needed improvement to ensure timely responses. (Section 2.c.)

- Most SIP activities were progressing according to schedules specified in the Sequoyah Post Restart Plan. (Section 2.c.)

- Engineering self assessment activities were effective in identifying areas for improvements. (Section 3)

REPORT DETAILS

1. Persons Contacted

*J. Baumstark, Plant Manager
*V. Bianco, Design Control Manager
*M. Burzynski, Site Engineering and Materials Manager
M. Cooper, Component Engineering Manager, Maintenance and Modifications
M. Cooper, Technical Support Manager
T. Cosby, Acting Technical and Planning Manager, Maintenance and Modifications
*D. Craven, Operations Support Group Manager, Site Engineering and Materials
*R. Driscoll, Nuclear Assurance and Licensing Manager
*R. Gladney, Instrumentation & Controls and Electrical Supervisor, Technical Support
*K. Meade, Acting Compliance Licensing Manager
*L. Poage, Quality Assurance Manager, Nuclear Assurance and Licensing
*R. Proffitt, Compliance Engineer
R. Rausch, Maintenance and Modifications Manager
*R. Shell, Site Licensing Manager
*M. Skarzinski, Methods and Procedures Manager
R. Young, Project Engineering and Support Manager, Site Engineering and Materials

Other licensee employees contacted during this inspection included engineers, QA personnel, technicians, and administrative personnel.

NRC Personnel

C. Casto, Section Chief, Division of Reactor Safety, Region II
*W. Holland, Senior Resident Inspector
S. Shaeffer, Resident Inspector

*Attended exit meeting

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Engineering and Technical Support Activities (37550)

a. Organization, Staffing, and Training

The inspector reviewed the licensee's organization and staffing to determine whether the engineering organization was adequately staffed to provide effective engineering support to the plant. Engineering and technical support were provided mainly by the Site Engineering and Materials Department, Technical Support Department, and the Maintenance and Modifications Department.

(1) Site Engineering and Materials was the design authority and provided support through the design control process and design basis information. Site Engineering was comprised of

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(1) Site Engineering and Materials was the design authority and provided support through the design control process and design basis information. Site Engineering was comprised of

eight groups which included Project Engineering and Support, Civil Engineering, Mechanical/Nuclear Engineering, Electrical Engineering, Operational Support, Materials, Site Contracts, and Site Purchasing. Additional staffing was provided by contract engineering personnel to address the increased workload and backlogs in Site Engineering. The mission statement and responsibilities for Site Engineering were delineated in the Site Engineering Notebook. The Operations Support Group within Site Engineering provided day-to-day design support to the plant. Procedure SEP 9.1.2, Training of Personnel, Revision 1, described the training program for Site Engineering personnel.

(2) The mission of Technical Support was to provide technical leadership for Sequoyah Nuclear Plant through optimization of system performance and reliability, quality management of reactivity and assigned engineering programs, proactive identification and resolution of plant issues, initiation of design modifications, and technical assistance to the operations and maintenance departments. The system engineer served as the owner of the assigned systems, acting as the plant's focal point to increase reliability and performance. Technical Support was comprised of six sections which included Nuclear Steam Supply System (NSSS) Systems, Balance of Plant (BOP) Systems, Common Systems, Instrumentation and Control (I&C) Systems, Electrical Systems, and Reactor Engineering. Procedure SSP-8.50, Conduct of Technical Support, Revision 3, described the responsibilities and organizational interfaces assigned to the system engineer (SE), reactor engineer (RE), and Technical Support management. Task Qualification Standards Manuals (TQSM) 210.000 and 220.000 contained certification requirements for the SE and RE respectively.

(3) Maintenance and Modifications was comprised of four sections which included Maintenance, Modifications, Facilities, and Planning and Technical. Engineering support was provided by the Component Engineering group within Planning and Technical, and the field engineers in Modifications. Component Engineering provided primary support to the maintenance and the modifications field engineers primarily provided support to the crafts during field implementation of design change notices (DCNs). Procedure SSP-6.1, Conduct of Maintenance/Modifications/Planning & Technical, Revision 3, was being revised to describe the responsibilities and organizational interfaces of Maintenance and Modifications with other plant departments. Training was also being developed to address the recent organization realignment within Maintenance and Modifications.

The inspector concluded that the various organizations reviewed which provided engineering support to the plant were adequately staffed to perform their assigned responsibilities.

b. Technical Programs and Performance Group

In addition to reviewing the organization and staffing of the various departments providing engineering support to the plant, the inspector also held discussions with licensee personnel and reviewed documentation regarding the transfer of responsibilities and functions for various technical programs from the former Technical Programs and Performance (TP&P) group to other plant departments. The TP&P group was eliminated during a reorganization of plant departments in March 1994.

The inspector reviewed documentation transferring programs from TP&P to Engineering and Materials, Technical Support, and Maintenance and Modifications. The inspectors also held discussions with personnel in the applicable groups to determine if the functions, responsibilities, and ownership were clearly established. The inspector also reviewed Nuclear Assurance (NA) Department assessment NA-SQ-94-017, Transfer of Technical Programs and Performance and Responsibilities.

During review of associated documentation and discussions with applicable personnel, the inspector noted that it was not clear as to who had ownership of the 50.49 environmental qualification (EQ) program. Maintenance and Modifications personnel initially indicated to the inspector that they owned the EQ program. The Engineering and Materials mission statement indicated that both the Mechanical/Nuclear Engineering group and the Electrical Engineering group had responsibility for the 50.49 program within engineering.

During further discussion of this matter, Maintenance and Modification personnel clarified their EQ role by indicating that they had ownership of the field implementation aspects of the EQ program. Engineering and Materials personnel indicated that mission statement for the Mechanical/Nuclear group contained a typographical error. The sentence in question should have read 50.59 program instead of 50.49 program. Licensee personnel indicated that the mission statement would be corrected to clarify EQ program responsibility. The inspectors noted that the NA assessment NA-SQ-94-017 also identified that Electrical Engineering personnel were initially unclear of their EQ program oversight responsibilities. The Engineering and Materials manager communicated the expectations for EQ program responsibility to the Electrical Engineering manager.

The inspector concluded that, except for the questions associated with the transfer of EQ program responsibilities, other plant groups were cognizant of the functions and responsibilities that were transferred to them from the former TP&P group.

c. Engineering Backlogs

The inspector reviewed the status of engineering backlogs to determine if sufficient engineering resources and management attention were being focused to reduce the large engineering work backlog. Activities reviewed included the drawing update backlog, open work requests and work orders (WR/WO) assigned to Site Engineering, and the Site Improvement Plan (SIP) status.

(1) During the drawing backlog review, the inspector noted that considerable resources were committed to the drawing update backlog reduction effort. This included the establishment of a team to review and reclassify some drawings from Category 3 to Category 2. The drawing reclassification effort also involved the identification and reclassification from Category 3 to Category 4, those drawings that do not depict plant configuration information and are not necessary to be maintained as-constructed.

The inspector reviewed various performance indicators and trend reports which tracked the progress of the Category 3 drawing update backlog reduction effort. The licensee's current schedule showed that the backlog of Category 3 drawing updates would be completed by June 1997. During discussions with the inspector, the licensee indicated that, as a result of the drawing reclassification effort, over 9000 Category 3 drawings had been reclassified as Category 2. The reclassified Category 2 drawings were considered to as backlogged. The inspector noted that the licensee's letter dated September 14, 1994, (which provided commitment closure information for Notice of Violation 50-327, 328/93-14-01) indicated that all Category 2 drawings had been updated. During further discussion of this issue at the exit meeting, licensee management indicated that a supplement to the September 14, 1994, letter will be sent to the NRC to clarify the status of backlogged Category 2 and Category 3 drawing updates.

The inspector concluded from reviewing the licensee's performance indicators and trend reports that the licensee was meeting established goals for reducing the drawing update backlog.

(2) In addition to reviewing the drawing backlog, the inspector also reviewed the status of open WRs/WOs that were assigned to Site Engineering and Materials. During this review, the inspector noted that a number of the WRs/WOs (35%) had not

been resolved in a timely manner by Site Engineering in that they were over two years old. The inspector discussed this matter with Site Engineering personnel who indicated that, although some of the older WRs/WOs had not been resolved in a timely manner, the majority of the WRs/WOs initiated prior to or during 1992 were not assigned to Site Engineering until 1993 and 1994. This was confirmed by the inspector during the review of WR/WO documentation. The inspector also noted during this review that some of the WRs/WOs had been incorrectly assigned to other plant groups before being reassigned to Site Engineering. The inspector further noted that a large majority of the WRs/WOs were priority code 4, meaning the WRs/WOs could be worked during normal maintenance scheduling. The inspector questioned Site Engineering personnel regarding whether they had prioritized or developed a schedule for responding to or resolving the WRs/WOs assigned to Site Engineering. Site Engineering personnel indicated that the WRs/WOs had not been prioritized for resolution. Engineering personnel further indicated that additional staff was being added to the Site Engineering Operations Support Group which would allow that group to provide more focus on responding to and resolving the open WRs/WOs.

The inspector concluded that the process by which Site Engineering received and prioritized WRs/WOs needed improvement to ensure that the WRs/WOs are responded to and resolved in a timely manner.

(3) The inspector reviewed the status of the SIP activities assigned to Site Engineering and Technical Support. The SIP was part of the Sequoyah Post Restart Plan, Revision 0, dated August 20, 1993. The Post Restart Plan described the process for proper identification, prioritization, funding, and management of improvement activities. The SIP was a list of improvement initiatives and action plans which included the items that were approved and funded for work in fiscal year 1994 (October 1, 1993 - September 30, 1994). Information entered in the SIP included action items, owners, and (as applicable) due dates.

The inspector reviewed various performance indicators and trend reports which tracked the progress of SIP activities. The inspector noted that approximately two-thirds of the initiatives and action plans initially identified in the SIP were either completed or closed because they were combined and being tracked with other SIP items (e.g., drawing update items). The inspector reviewed SIP items assigned to Site Engineering and Technical Support that were scheduled for completion in September 1994 and October 1994. The inspector also reviewed documentation and discussed the status of these items with licensee personnel. Most of the

items were on schedule to be completed. For those items that were not going to be completed as scheduled adequate justification was provided for extending the completion date.

The inspector concluded that most of the SIP activities were progressing according to schedules specified in the SIP and the Sequoyah Post Restart Plan.

Violations or deviations were not identified in the areas inspected.

3. Engineering Self Assessment Activities

The inspector reviewed assessment reports of Site Engineering activities. The assessments were performed by NA and Site Engineering. Reports reviewed included NA-SQ-94-017, Transfer of Technical Programs and Performance Responsibilities; NA-SQ-94-025, Engineering Performance Evaluation, and the Sequoyah Nuclear Engineering INPO Self Assessment. The assessments were thorough and indepth. Assessment NA-SQ-94-025 was conducted by NA and evaluated Site Engineering's performance from November 29, 1993, to June 29, 1994. The assessments identified areas of strength and weakness. The inspector discussed the assessment findings with Site Engineering personnel who indicated that action plans were being developed to address the findings from the assessments.

The inspector also reviewed various performance indicators and monthly trend reports for Site Engineering which were based, in part, on self assessment activities. These indicators also identified strengths and weaknesses.

The inspector concluded that the assessments of engineering conducted by NA and Site Engineering were effective in identifying areas where additional management attention was needed for improvement.

Violations or deviations were not identified in the areas inspected.

4. Exit Interview

The inspection scope and results were summarized on September 23, 1994, with those persons indicated in paragraph 1. The inspector described the areas inspected and discussed in detail the inspection findings. Licensee management indicated that a supplement to their letter dated September 14, 1994, would be submitted to the NRC to clarify the status of backlogged Category 2 and Category 3 drawing updates. Proprietary information is not contained in this report. No dissenting comments were received from the licensee.

5. Acronyms and Initialisms

BOP	Balance of Plant
DCN	Design Change Notice
EQ	Environmental Qualification
I&C	Instrumentation and Control
INPO	Institute of Nuclear Power Operations
NA	Nuclear Assurance
NSSS	Nuclear Steam Supply System
QA	Quality Assurance
RE	Reactor Engineer
SE	System Engineer
SIP	Site Improvement Plan
SSP	Site Standard Practice
TP&P	Technical Programs and Performance
TQSM	Task Qualifications Standards Manual
WO	Work Order
WR	Work Request