UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No. 50-327/80-13

Licensee: Tennessee Valley Authority
500A Chestnut Street
Chattanooga, TN 37401

Facility: Sequoyah Unit 1

Docket No. 50-327

License No. DPR-77

Inspection at Sequoyah site near Chattanooga, Tennessee

Inspector: C. Julian for
W. T. Cottle — 4/28/80 Date Signed

Approved by: H C Dance
H. C. Dance, Section Chief, RONS Branch — 4/28/80 Date Signed

SUMMARY

Inspection on March 1-31, 1980

Areas Inspected

This routine, announced inspection involved 64 inspector hours onsite in the areas of plant tours, verification of license conditions, fuel loading, followup of previously identified items, followup of plant incidents and independent inspection effort.

Results

Of the six areas inspected, no items of noncompliance or deviations were identified in five areas; one item of noncompliance was found in one area (Infraction - failure to maintain and implement procedure as required by technical specifications, paragraph 7).

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DETAILS

1. Persons Contacted

Licensee Employees

J. M. Ballentine, Plant Superintendent
C. E. Cantrell, Assistant Plant Superintentent
W. F. Popp, Assistant Plant Superintendent
D. J. Record, Operations Supervisor
W. H. Kinsey, Results Supervisor
R. J. Kitts, Health Physics Supervisor
J. W. Doty, Maintenance Supervisor (M)
J. M. McGriff, Maintenance Supervisor (I)
W. A. Watson, Maintenance Supervisor (E)
R. S. Kaplan, Supervisor Public Safety Service
C. R. Brimer, Outage Director
D. O. McCloud, Quality Assurance Supervisor

Other licensee employees contacted included 2 construction craftsmen, 4 technicians, 5 operators, 6 shift engineers, 6 security force members, and 3 corporate office personnel.

Other Organizations

Seven inspectors and supervisors, Region II, USNRC
Five engineers and supervisors, NRR, USNRC

2. Exit Interview

The inspection scope and findings were summarized with the plant superintendent and members of his staff on March 7, 14, 21, and 28, 1980. The item of noncompliance discussed in section 7 was reviewed with the plant superintendent.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Plant Tours

The inspector toured various areas of Unit 1 on a routine basis throughout the reporting period. The following activities were reviewed/verified:

a. Adherence to limiting conditions for operation which were directly observable from the control room panels.

b. Control board instrumentation and recorder traces.

c. Proper control room and shift manning.

d. The use of approved operating procedures.

e. Unit operator and shift engineer logs.

f. General shift operating practices.

g. Housekeeping practices.

h. Fire protection measures for hot work.

i. Posting of hold tags, caution tags and temporary alteration tags.

j. Measures to exclude foreign materials from entry into clean systems.

k. Personnel, package, and vehicle access control for the Unit 1 protected area.

l. Surveillance testing in progress.

m. Maintenance activities in progress.

No items of noncompliance or deviations were identified.

6. Verification of License Conditions

Prior to the commencement of fuel loading, the inspector verified compliance with the following conditions specified in Section 4 of License No. DPR-77.

a. Shift Technical Advisor

The qualifications and training status of the Shift Technical Advisors were reviewed during a previous inspection (see IE Report 50-327/80-03). The inspector verified that the items identified during the previous inspection had been adequately corrected and that the shift technical advisors had been assigned to each shift.

b. Shift Supervisor Duties

The inspector verified that the duties of the Shift Supervisor (Assistant Shift Engineer) had been reviewed by the Manager of Power Operations. In addition, DPM N7905 was issued on January 7, 1980, and requires that a summary of all duties and responsibilities be prepared and submitted to the Manager of Power Operations annually. The Manager of Power Operations will review the summary with a shift supervisor. The inspector also verified, through observation periods, that the

assigned shift clerk handled routine administrative duties that would detract the shift supervisor from the management responsibility for assuring the safe operation of the plant.

c. Shift Manning

The inspector verified that administrative procedures included limits on overtime worked by licensed operators. DPM N7902 dated January 7, 1980, specified no more than two consecutive days in excess of 12 hours without the approval of the Plant Superintendent. In addition, the Plant Superintendent issued additional limitations which were later reflected in revision 10 of Administrative Instruction AI-2. The additional limitations fully implemented the overtime provisions of the license condition.

Revision 10 of AI-2 also addresses the requirement for an additional Senior Reactor Operator on shift. The inspector pointed out that AI-2 only required the additional Senior Reactor Operator in Modes 1, 2 and 3 whereas the license condition also specified Mode 4. This was acknowledged as an inadvertant ommission and is in the process of being corrected.

d. Revised Scope and Criteria for Licensing Examinations

The inspector verified that qualified individuals were available to augment the operating shifts in accordance with license condition (4)d. The inspector reviewed the resumes of those contractor individuals designated to fulfill the license condition.

e. Safety Engineering Group (SEG)

The inspector verified that a duly constituted SEG was established onsite prior to the commencement of fuel loading. Further clarification of this license condition by the Office of Nuclear Reactor Regulation revealed that the intent of the license condition was that the SEG would be onsite during the normal workweek day shifts for the duration of the special low power test program.

f. Licensee Onsite Operating Experience Evaluation Capability

The inspector verified that provisions had been established to insure that the operating history of the plant and plants of similar design are evaluated onsite in accordance with license condition (4)g. Interim measures have been taken to provide distribution of information from licensee's Nuclear Experience Review Panel to the Shift Technical Advisors pending issuance of a formal Division Policy Manual Procedure on this subject.

g. Shift Relief and Turnover Procedures/Shift Personnel Responsibilities/ Control Room Access

The inspector reviewed the administrative procedures issued to implement the requirements of license conditions (4)h, (4)i, and (4)j. In each case, the inspector found that the established controls were adequate to meet the requirements of the license.

h. Degraded Core-Training

Training on the use of installed equipment and systems to control or mitigate accidents in which the core is severely damaged was found to have been performed as a part of the routine retraining program which covered significant changes to the abnormal and emergency operating instructions. Implementation of a more formalized program to address this area in greater detail is in progress and will be reviewed in subsequent inspections (327/80-13-01).

i. IE Bulletins on Measures to Mitigate Small Break LOCA's and Loss of Feedwater Accidents

The inspector verified that adequate training and instructions had been provided to the operators to insure that engineered safety features are not overridden and guidance was provided on dealing with non-condensible gases in the primary system.

j. Onsite Technical Support Center/Onsite Operational Support Center

The inspector verified the adequacy of the onsite Technical and Operational Support Centers. Each center was found to meet the requirements of NUREG-0578 as specified for January 1, 1980.

k. In-Plant Radiation Monitoring-Partial

Equipment for determining the airborne iodine concentration of plant areas under accident conditions was found to be provided in the form of portable volumetric air samplers and permanent laboratory counting systems. Plant Health Physics Technicians have been trained on the procedures governing use of this equipment.

l. Communications

The inspector verified the operability of the direct telephone lines between the control room, licensee's Emergency Operations Facility and the NRC Incident Response Center.

No items of noncompliance or deviations were identified.

7. Fuel Loading

The inspector observed initial fuel loading activities in order to ascertain the adequacy of fuel loading records observe operating staff performance, and ascertain conformance to license and procedural requirements. Specific areas examined included:

a. Verification of technical specification and license requirements.

b. Verification of measurable count rates on Nuclear Instrumentation Systems.

c. Verification of initial fuel loading procedure, FHI-7, Refueling operation (initial core loading), prerequisites.

d. Verification of shift manning.

e. Verification of proper maintenance of Inverse Multiplication Plots.

f. Observation of use of FHI-7 to control fuel handling evolutions.

g. Observation of personnel access control to refueling floor, use of fuel status boards, and performance of fuel handling crews.

The inspector noted on March 4, 1980, the official copy of FHI-7 being used by the Senior Reactor Operator in charge of the fuel handling evolution was revision 2 vice the current revision 4.

In addition, the requirement for continuous drag load monitoring during fuel movement specified in Section II.B of FHI-7 had been waived by plant supervision without a temporary change having been executed. These items were brought to the attention of the Assistant Plant Superintendent who took prompt action to suspend fuel handling evolutions until they could be resolved. The failure to maintain the official copy of FHI-7 to the current revision and the failure to execute a temporary modification to FHI-7 constitute an apparent noncompliance with Technical Specifications 6.8.1 and 6.8.3 (327/80-13-02). The actions taken to correct the apparent non-compliance have been reviewed by the inspector and found to be satisfactory. Fuel loading was suspended until FHI-7 was updated to revision 4 and a temporary modification was executed. Revision 4 was compared to revision 2 to insure that no adverse impact could have resulted from the use of the outdated revision. The document distribution system was reviewed to determine why the fuel handling supervisor's copy had not been updated and action was taken to prevent recurrence. This item is closed.

In addition to the technical specification requirements verified by direct observation, the following were verified by a review of the latest completed surveillance test documentation:

Surveillance Requirement	Surveillance Instruction
4.1.2.1	SI-8, SI-64
4.1.2.3	SI-40
4.1.2.5	SI-3, SI-51
4.8.1.2	SI-60
4.8.2.4	SI-3, SI-100
4.9.2.C	SI-99
4.9.4	SI-6
4.9.9	SI-6

No items of noncompliance or deviations were identified.

8. Followup of Plant Incidents

During the reporting period, the inspector conducted followup activities on the following plant incidents:

a. On March 4, 1980, an unauthorized licensee employee managed to gain access to the protected area. The employee was aprehended by the Assistant Plant Superintendent in the Unit 1 Reactor Building. This incident was the subject of a special security inspection subsequently conducted by Region II safeguards personnel on March 10-11.

b. On March 11, 1980, an incident involving an altercation between a Public Safety Services Shift Lieutenant and another licensee employee resulted in a temporary suspension of both employees.

c. On March 6, 1980, a Region II NRC inspector was found attempting to enter a vital area without having obtained proper authorization. His unescorted access badge was suspended until remedial security training could be provided.

The inspector reviewed the circumstances involved in each incident and the actions taken by licensee management in response to the incident. Licensee's management response appeared to be both timely and adequate in each case.

No items of noncompliance or deviations were identified.

9. Followup of Previously Identified Items

(Closed) Open Item (327/76-17-01) Review of system operating instructions prior to fuel loading. A special PORC subcommittee was appointed to complete the review of all system operating instructions. The review was completed and documented prior to fuel loading. This item is closed.

(Closed) Open Item (327/78-39-39) Record keeping program for instrument shop. The inspector reviewed Section Instruction Letter RS&M(I) 72 and had no further questions in this area. This item is closed.

(Closed) Open Item (327/80-03-01) Definition of the role of the Shift Technical Advisor in evaluation and dissemination of operating experience from other plants. The inspector reviewed DPM N79 A15 dated January 7, 1980, which defined the shift technical advisor's role in this area. In addition, interim measures have been taken to provide distribution from licensee's Nuclear Experience Review Panel to the Shift Technical Advisors pending issuance of a formal Division Policy Manual procedure on this subject. The inspector had no further questions in this area. This item is closed.

(Closed) Open Item (327/80-03-02) Definition of Westinghouse role in conduct of tests and review of test results. The inspector found that SQA-44 and SQA-109 had been revised to define the role of the Nuclear Steam Supply System vendor. This item is closed.

(Closed) Open Item (327/80-03-04) Augmentation of operating shifts. The shifts have been augmented with personnel with PWR experience in accordance with the license conditions. This item is closed.

(Closed) Open Item (327/80-03-06) Onsite Safety Engineering Group. This group has been established in accordance with the license conditions. This item is closed.

(Closed) Licensee Identified Item (327/80-04-01) Bettis valve actuators (NCR 19P). The inspector reviewed the licensee's report on this item, submitted on January 17, 1980, in accordance with 10 CFR 50.55e. The inspector reviewed completed work plan No. 8475 which documented completion of the fieldwork, post modification testing, and verification of operability. This item is closed.

(Closed) Licensee Identified Item (327/79-29-03) Improper coils installed in auxiliary feedwater and emergency gas treatment systems (NCR 7P). The inspector reviewed completed workplan No. 3269 and had no further questions. This item is closed.

No items of noncompliance or deviations were identified.

10. Independent Inspection Effort

The inspector routinely attended the morning scheduling and staff meetings during the reporting period. These meetings provide a daily status report on the construction and testing activities in progress as well as a discussion of significant problems or incidents associated with the construction, preoperational testing and operations effort.

The inspector observed the latching and unlatching of the full length control rod drive mechanisms on March 6-7. Items verified included the use

of the approved fuel handling instruction, cleanliness controls, personnel and tool access control, and the current calibration of the spring scale used in the evolution.

Throughout the inspection period, the inspector observed portions of the inspection of the low pressure turbine spindles and the replacement of the upper internals package guide tube pins.

The inspector attended the bimonthly Resident Inspector's Meeting at the Region II Atlanta office on March 17-19.

The inspector provided assistance to and coordinated the inspection activities of visiting NRC personnel during the reporting period.

No items of noncompliance or deviations were identified.