Docket Files

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

November 16, 1989

Docket No. 50-445

Mr. W. J. Cahill, Jr.
Executive Vice President
Texas Utilities Electric
400 North Olive Street, Lock Box 81
Dallas, Texas 75201

Dear Mr. Cahill:

SUBJECT: NRC INSPECTION REPORT 50-445/89-200 - COMANCHE PEAK OPERATIONAL READINESS ASSESSMENT TEAM INSPECTION

An announced special team inspection of the Comanche Peak Steam Electric Station was conducted by the NRC Headquarters staff during the period of October 16-27, 1989. The purpose of this inspection was to provide the Director of the Office of Nuclear Reactor Regulation with an independent assessment of the construction and operational status of your facility.

The Operational Readiness Assessment Team (ORAT) inspection concluded that the construction and testing of the plant was not sufficiently complete to make a determination with respect to operational readiness. Consequently, the team held an interim exit with you and members of your staff on October 27, 1989, and will schedule a follow-up inspection visit in the future. This letter documents the team's conclusions, and the concerns identified during the interim exit that require your attention before the follow-up inspection. This letter does not detail any of the strengths identified by the inspection team. A discussion of the inspection findings will be provided in Inspection Report 50-445/89-200, which will be issued following the completion of the remainder of the inspection.

The inspection team concluded that an insufficient number of systems were in the direct operational control of the operators to support a valid assessment of operational readiness. In addition, the team concluded that the plant staff had not adequately assumed responsibility for the systems and areas under operational control, and had not fully implemented operational programs and procedures as a direct result of the large amount of remaining construction and maintenance work. Finally, the team concluded that the operations and operations support programmatic readiness were not adequate because several operational programs had not been implemented or had weaknesses which precluded their effective implementation.

DF01
1/1

As we discussed with you and your staff, our inspection activities resulted in a clearer definition of the expectations regarding the level of construction completion required for issuance of the operating license and a more detailed assessment of the progress of your remaining work activities. In addition, the meaning and purpose of the operational readiness period was clarified.

As discussed during the interim exit, several actions must be taken before the remainder of the inspection can be completed.

1. Evaluate and resolve the specific concerns identified by the inspection team and listed in Enclosure 1. In addition, perform a broad-based assessment of the adequacy and implementation of all of your programs to identify and resolve any similar deficiencies.

2. Based on the minimal previous commercial experience levels of your mid-level managers and licensed operating staff, take steps to:

   a. Reduce the maintenance backlog and ensure that all systems are functional for power operations.

   b. Evaluate augmentation of the management staff with experienced personnel.

   c. Focus attention on plant-labeling adequacy by examining the status of the present plant labeling and evaluating the need for immediate corrective actions, and by committing to implementing labeling upgrades before the completion of the first refueling outage.

3. The remainder of the ORAT inspection will be performed after you have:

   a. Demonstrated that all systems can function by the successful performance of all technical specification surveillance tests that are required for 5 percent power operations--to the extent they can be performed before fuel load.

   b. Decided that the facility is operationally ready for low power operation, including completion of the items above, and advised the NRC that the facility is ready for the team to return and confirm your operational readiness assessment.

Sincerely,

Dennis M. Crutchfield

Dennis M. Crutchfield, Associate Director
for Special Projects
Office of Nuclear Reactor Regulation

Enclosure:
Identified Concerns

cc w/enclosure:
Mr. Robert F. Warnick
Assistant Director
for Inspection Programs
Comanche Peak Project Division
U. S. Nuclear Regulatory Commission
P. O. Box 1029
Granbury, Texas 76048

Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011

Ms. Billie Pirner Garde, Esq.
Robinson, Robinson, et al.
103 East College Avenue
Appleton, Wisconsin 54911

Mrs. Juanita Ellis, President
Citizens Association for Sound Energy
1426 South Polk
Dallas, Texas 75224

E. F. Ottney
P. O. Box 1777
Glen Rose, Texas 76043

Mr. Roger D. Walker
Manager, Nuclear Licensing
Texas Utilities Electric Company
400 North Olive Street, L. B. 81
Dallas, Texas 75201

Texas Utilities Electric Company
c/o Bethesda Licensing
3 Metro Center, Suite 610
Bethesda, Maryland 20814

William A. Burchette, Esq.
Counsel for Tex-La Electric
Cooperative of Texas
Heron, Burchette, Ruckert & Rothwell
1025 Thomas Jefferson Street, NW
Washington, D.C. 20007

GDS Associates, Inc.
Suite 720
1850 Parkway Place
Marietta, Georgia 30067-8237

Jack R. Newman, Esq.
Newman & Holtzinger
1615 L Street, NW
Suite 1000
Washington, D.C. 20036

Chief, Texas Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756

Honorable George Crump
County Judge
Glen Rose, Texas 76043

Distribution:
Docket File
NRC PDR
Local PDR
CPPD Reading
ADSP Reading
DMCrutchfield, NRR
BKGrimes, NRR
WDLanning, NRR
JEKonklin, NRR
CAVanDenburgh, NRR
JRBall, NRR
EWBrach, NRR
PFMcKee, NRR
CIGrimes, NRR
RFWarnick, NRR/ADSP-Comanche Peak
WJohnson, NRR/ADSP-Comanche Peak
PEHarmon, NRR/ADSP-Sequoyah
DDChamberlain, RIV
TOMcKernon, RIV
JEBess, RIV, SRI South Texas
DCKosloff, RIII, RI Davis-Besse
DRIS R/F
RSIB R/F
TMurley
JSniezek
FMiraglia

SEE PREVIOUS CONCURRENCE

OFC	RSIB:DRIS	SC:RSIB:DRIS	C:RSIB:DRIS	D:DRIS	ADSP:NRR
NAME	CAVanDenburgh*	JEKonklin*	WDLanning*	BKGrimes*	DMCrutchfield
DATE	11/07/89	11/07/89	11/07/89	11/07/89	11/ /89

ENCLOSURE 1

CONCERNS IDENTIFIED DURING INTERIM INSPECTION EXIT OF OCTOBER 27, 1989

1. Unidentified hardware deficiencies - Numerous hardware deficiencies were identified in systems and rooms which had been turned over to operational control. These deficiencies had not been identified during the room and system turnovers, and had not been identified by the operators or system engineers during routine tours and surveillances.

   For example, the inspection team identified (1) leakage of the 1B Diesel Generator (DG) jacket water and service water piping joints, and (2) standing water, loose relay label plates, and broken terminal board wire retainers in DG control cabinets. The IE battery cells had electrolyte levels above high level marks and showed evidence of overfilling. There were invalid Quality Control Nonconformance report waiver tags posted on equipment which had not been removed nor identified during room and area turnovers. The team found a leaking Containment Spray (CS) service water relief valve, tape blockage of the CS flow transmitter drain line, a disconnected limit switch on valve HCV-0606, and removed safety injection accumulator spool pieces without procedural guidance.

   Throughout the plant, the team noted that (1) the electrical distribution and process instrumentation doors under operational control were not routinely secured by operations, (2) the vent and drain valve caps were not installed, and (3) several rising stem valves had water and debris in the top of the actuator which could adversely affect the operation and reliability of the valves.

2. Operational Responsibility - The actions of a licensed operator indicated a lack of "ownership" for the operational consequences of conflicting testing requirements, in that the operator was persuaded by maintenance technicians to simultaneously perform two surveillances which he believed conflicted.

3. Shift Communications - The team observed a lack of effective communication between operating shifts concerning the corrective and troubleshooting actions following problems encountered turning the main generator.

4. System Status Control - ODA-410, "System Status Control," provided a method for recording the current system valve alignments and maintaining configuration control of all operational systems. A review of the DG system identified that the valve status file was not being updated as required, in that the position of DG starting air isolation valves was not correctly updated on the drawing. Although the use of marked-up drawings is a difficult method to implement, the valve alignments of only four systems were being controlled by the procedure.

5. LCO Tracking and Control - ODA-308, "LCO Tracking Log," provided a method for tracking and control of LCO action requirements. The procedural requirements were not correctly implemented in that the entry and exit of LCOs were not logged, and the shift technical advisor reviews of recent LCO action requirements were not performed.

6. Plant Investigation Reports - STA-503, "Plant Investigation Report," provided for identification and tracking of PIRs in order to obtain timely and effective implementation of corrective actions for plant events. This program was not properly implemented and the corrective actions were not timely or effective because (1) immediate corrective actions were not being recorded, (2) PIRs were not initiated for problems concerning the main generator turning problems as indicated by the shift log, (3) the operations department believed that PIR closure could occur when corrective actions were identified vice implemented, and most importantly (4) 23 outstanding PIRs were overdue on October 20, 1989, by as much as 1-4 months and 4 PIRs on inadequate clearances as early as April 1989 had not been evaluated.

7. Corrective Actions for NRC Inspections - There were several corrective actions which remained to be completed for previous NRC inspection findings. For example, the team noted that 159 of the original 238 discrepancies between the emergency response guidelines and the facility's design basis remain to be resolved prior to fuel load. In addition, the team noted that the corrective actions to resolve the accessibility and operability of equipment in the AFW turbine feedwater pump room had not identified or resolved concerns involving (1) inadequate grating installed to access equipment, (2) excessive turns required to operate valves, and (3) inadequate room ventilation.

8. Confined Space Entries - STA-606, "Work Requests and Work Orders," required that a confined space work permit be issued prior to beginning work in any confined space. The team noted that work was secured on the outboard containment isolation valve for the containment spray system; however, the confined space was not secured (i.e., closed or posted) following the completion of this work.

9. Design Modifications - STA-205, "Changes to Procedures," and STA-717, "Design Modification Review Group," procedurally allowed modifications to be performed without a safety evaluation if the modification was performed prior to fuel load. The applicant had performed safety evaluations for all modifications and intended to incorporate all modifications as a final safety analysis change prior to fuel load; however, the potential existed to miss evaluating a change to the facility. In addition, STA-205 did not require a safety evaluation or screening for typographical errors or for non-significant changes of intent. This ambiguous requirement had the potential to miss safety evaluation for omitted symbols such as +/- signs and required individual interpretation as to the intent of the procedure.

10. Limiting Conditions for Operation Tracking - ODA-308, "LCO Tracking Log," did not require documentation of management authorization for voluntary LCO entries, verification of the required periodic management reviews, and documentation and retention of the rationale for LCO exits.

11. Root Cause Analysis and Trending - The system engineers manually performed data reduction and trending of component root cause failure. This method was time consuming and difficult to perform because the nuclear plant reliability data system (NPRDS) was not fully implemented and had numerous component identification differences with the master equipment list.

12. Inter-system Actuations - STA-606, "Work Control Procedure," did not require notes or precautions to specifically identify to the operators anticipated inter-system actuations such as alarms or trips which may occur during planned work activities.

13. Timely Incident Investigations - STA-422, "Processing of One Forms," did not support an expeditious initiation of incident investigations because the one form must be processed through the work control center and plan of the day meetings before the incident team is formed.

14. Post-Trip Reviews - ODA-108, "Post-Trip Review," assumed that all trips had a definitive cause and did not provide for additional evaluations of those trips which cannot be definitively identified prior to restart of the facility. In addition, the procedure did not require timely written statements of the principals involved in a trip in order to document the circumstances before memories fade.

15. Plant Labeling - An upgrade program to improve the useability of the plant labeling throughout the plant had not been implemented. The valves and components were currently labeled with metal "dog tags" which were very difficult to locate and use. In addition, rooms and commodities (i.e., trays, conduits, and piping) were not currently labeled throughout the plant. The implementation of this upgrade program had been delayed until completion of the first refueling outage (and may not be finished by then). Because of the difficulty in finding and reading the present labels, a potential exists for operator errors.

16. One Forms - STA-421, "One Form Evaluation," provided a new method for identification and resolution of plant deficiencies and had not been implemented. This program was intended to consolidate and simplify the several problem identification methods.

17. Safety Evaluations - STA-602, "Temporary Modifications," did not require a safety evaluation of temporary modifications which were performed before fuel load. The applicant was performing temporary modifications without safety evaluations and intended to reduce the number of outstanding temporary modifications, and perform safety evaluations of the remainder at the time of fuel load. Although acceptable, this method had the potential to miss performing the required safety evaluations.

18. Preventive Maintenance Programs - All of the periodic preventive maintenance requirements were not being performed due to the large construction and maintenance work load. As a result, the PM backlog was increasing.

19. Scaffolding - CMP-CV-1014, "Scaffold Erection and Control," which controlled scaffolding erection over safety-related and seismic equipment during the operations phase, had not been implemented.

20. Previous Commercial Experience - Although the licensed operators met the minimum experience requirements of the applicant's program for hot participation experience, the operators had minimal previous commercial operating experience. In addition, the mid-level managers in the areas of operations, technical support, plant evaluations, radiation protection, and fire protection, also had minimal previous commercial operating experience. Although the ANSI 3.1 requirements for minimal experience levels had been met, the lack of depth of commercial operating experience in managers and operators will make a smooth initial startup more difficult.

21. Procedural Inadequacies - ABN-710A, "SG Water Level Instrument Malfunction Check," had referencing inadequacies which had the potential to confuse the operators and result in a trip of the reactor. All of the operators questioned incorrectly identified the steam generator protection bistables due to confusing references in the procedure. In addition, there were unauthorized and unreviewed temporary markings on the instrument cards which incorrectly identified the level switch numbers. Although corrective actions for previously-identified procedure problems had been implemented for this procedure, this potential error was not identified.

22. Quality Assurance Involvement in Operations - Discussions with the Operations Manager indicate that the Quality Assurance Department had not been used for the identification and resolution of operations problems. In addition, the Quality Assurance Department had not performed an audit of the technical specification (TS) surveillance scheduling program, but did intend to review this master schedule of the TS required testing prior to fuel load. During a limited review, the inspection team identified four errors in the master schedule where required TS surveillances were not scheduled. The lack of Quality Assurance Department involvement in the support of management overview of the operations department and operational programs was not indicative of a pro-active approach to quality involvement in the support of operational readiness.

23. Technical Specification Surveillance Procedures - The trigger procedures (i.e., shift logs) for conditional TS surveillance requirements allowed missing hourly primary and secondary temperature and pressure readings due to the longer frequency of the trigger procedures. In addition, the TS surveillance requirements for localized containment temperatures were not specifically obtained by the surveillance procedure.

24. Clearance Procedures - STA-605, "Clearance and Safety Tagging," allowed the shift supervisor to remove a danger tag and reposition or operate equipment on a temporary basis in nonemergency conditions without sufficient controls to ensure the adequacy of the remaining clearance. This is particularly safety significant at this facility due to the extensive use of master clearances and tiered clearances.