

ENCLOSURE

SUPPLEMENTAL SAFETY EVALUATION REPORT
COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NOS. 50-445 & 50-446

On July 10-11, 1985, the staff conducted an audit of the qualifications and training of the operators for the Comanche Peak Steam Electric Station (CPSES), and the adequacy of the training programs in place to maintain operator readiness. A special topic of the audit was the present status of and the future plans for use of Shift Advisors. The audit team also discussed with representatives of the applicant recent changes in the applicant's organization. Following is a discussion of and the audit team's evaluation of these matters.

Current Staffing Status

The applicant now has a total of 57 operators licensed for operation of CPSES Unit 1 (36 senior reactor operators (SROs) and 21 reactor operators (ROs)). Of these 57 operators, 39 are assigned to shift operations and the remaining 18 are serving in other positions on the plant staff, primarily in the training department and in plant operations.

The applicant has provided 24-hour shift coverage since 1980, using six operating shifts. Each shift is staffed with five licensed operators, a Shift Supervisor (SRO), an Assistant Shift Supervisor (SRO), and three operators (RO or SRO). The CPSES Unit 1 Technical Specifications require a minimum of two SROs and two ROs per shift. The Technical Specifications for two-unit operation will require two SROs and three ROs per shift. However, the applicant plans to operate the two units with seven licensed operators on each shift: one Shift Supervisor (SRO), two Assistant Shift Supervisors (SRO), and four reactor operators (RO). The number of licensed operators available is more than adequate to support the applicant's planned staffing, which, in turn, is in excess of the required minimum staffing.

In addition to the licensed operators, the applicant now has about 60 auxiliary operators (AOs) split among the six operating shifts. The AOs are selected and trained with the objective that they eventually will become licensed operators. The initial training for qualification as an AO takes from 1½ to 2½ years depending upon the background of the individual at the time of entry into the AO program.

Each operating shift has a Shift Technical Advisor (STA) who satisfies the requirement to provide engineering expertise to the shift. Five of the current STAs are SRO licensed. At this time, the applicant plans to retain the STA as a separate position and not attempt to have individuals serve in a dual role as STA/SRO.

Since 1982, each shift also has had the services of a Shift Advisor (SA), an individual who previously was licensed on another plant similar to Comanche Peak, and who brings to the shift a background of practical operating experience.

Operator Qualifications and Training

Some concern has been expressed that operator licensing examinations at CPSES had resulted in relatively high failure rates and that this could be indicative of problems with the training program.

Discussions with representatives of the applicant revealed that indeed there had been relatively high failure rates on the first two licensing examinations. The applicant reported that this was due largely to an attempt to allow operators from the applicant's fossil plants to obtain licenses for CPSEs. Many of these individuals just could not pass the licensing examination. The applicant recognized the error of this approach and has selected subsequent operator candidates primarily from applicants with previous experience in the Navy nuclear program.

Results of the more recent licensing examinations have shown considerable improvement. As noted earlier, the applicant now has a total of 57 operators licensed for CPSES. We conclude that the initial training program at CPSES has been adequate to provide an ample number of operators who have demonstrated their qualifications by successfully passing the NRC licensing examinations.

Requalification Training

The first group of operator candidates took their NRC licensing examinations in July of 1983. A requalification training program was established in September of 1983. Since that time, licensed operators have participated in requalification training for one week out of each six week period, as allowed by the six-shift rotation used by the applicant. For the most part, the STAs and SAs have participated in requalification training with their shifts. The AOs also participate in a requalification training program of their own.

Discussions with the applicant's representatives indicated a good working relationship between the operations department and the training department. Any shortcomings in operator capabilities noted during plant operations are fed back to the training department for special emphasis during subsequent requalification training.

Audit of the training records of selected individuals revealed no apparent discrepancies in the training program or in personnel participation in the program. The first requalification examinations were given in the fall of 1984, and Region IV gave requalification examinations to ten operators in April of 1985. No particular programmatic problems were revealed by these examinations. The next annual requalification examination is scheduled for September 1985, at which time the group of operators that was first licensed by the NRC will be up for license renewal. Barring major problems revealed by the September examinations, we conclude that the applicant's requalification training program is acceptable.

Shift Advisors

Early staff review of the applicant's organization and staffing identified a lack of previous experience in large commercial nuclear plant operation among the candidates for licensed operators. To alleviate this deficiency, the applicant hired a number of individuals who had had previous experience as licensed operators on large commercial pressurized water reactor plants. These individuals were to provide advice to the operating shifts. Five of these Shift Advisors have been on duty at CPSES since late-1982.

Each of the Shift Advisors has received special training on CPSES systems, procedures and technical specifications in accordance with the requirements of Generic Letter 84-16. They have been integrated with the operating shifts and, for the most part, participate in the requalification training with their shifts. The applicant reports that they have been well accepted by the shift crews and that they have performed valuable service during the preparation of procedures and the final system checkouts and tests in preparation for low power licensing.

Generic Letter 84-16 specified that the use of Shift Advisors to provide a base of operating experience to the operating shifts was acceptable through March 31, 1985. Applicants who planned to obtain licenses after that date were to have the operating experience integral with the shift personnel rather than rely on Shift Advisors. The March 31, 1985, date was selected because it appeared to be achievable by the plants then in the licensing process and because the NRC did not want to continue a practice which could lead to pirating of advisors from operating plants.

Licensing for CPSES originally was scheduled for the summer of 1984. Use of Shift Advisors at CPSES thus fit the criteria established in GL 84-16. However, licensing of CPSES continued to slip. By January of 1985, it appeared that licensing could not occur until perhaps May of 1985. The staff at that time examined the use of Shift Advisors at CPSES and concluded that

continued reliance on Shift Advisors was preferable to the alternative of requiring the applicant to have assigned shift personnel obtain the requisite minimum of six months of hot participation at operating plants. However, the applicant was encouraged to take advantage of opportunities between then and actual plant licensing to obtain practical experience for the shift personnel.

During the audit conducted on July 9-10, 1985, the staff examined the experience that had been obtained by the licensed CPSES operators. The staff learned that the applicant has taken advantage of opportunities to have the CPSES operators participate in evolutions at other PWR plants. This experience has been selective such that the operators have not merely logged time during plant operations, but have been present during the special evolutions that should be valuable to later CPSES operations. All of the CPSES Shift Supervisors and Assistant Shift Supervisors have participated in this special training. Each has now accumulated approximately six weeks of total time at other operating plants. Further, for each of the operators, the experience has been gained at more than one PWR. The CPSES operators have now participated in hot operations at nine different PWRs. This variety of experience should prove valuable during future CPSES operations.

The applicant strongly prefers to continue the present approach of using Shift Advisors rather than attempting to send the CPSES operators to other plants for extended periods to obtain the hot operating experience. To do so would disrupt the shift operations and would interrupt the requalification training. Further, it is not clear that merely logging time at an operating facility is particularly valuable. Continuation of the current program would enable the CPSES operators to obtain particular experience in special plant evolutions at operating facilities as the opportunities present themselves, but would not emphasize attaining a minimum of six months experience at other plants. The applicant also plans to expand the program to include hot participation training for other licensed personnel, as well as for the Shift Supervisors and Assistant Shift Supervisors.

The audit team concludes that continuation of the present program is indeed preferable to pulling people off shift for extended periods to acquire the specified six month's minimum experience. We note, however, that the applicant now has on staff four individuals who were previously licensed and who meet the criteria of Generic Letter 84-16. It is possible that, by the time of licensing, the operating shifts at CPSES could have members on shift who have the requisite hot operating experience. In any event, the applicant intends to retain the services of the Shift Advisors.

Organization Changes

The audit team also discussed recent changes that have occurred in the applicant's organization. Within TUGCO, all nuclear operations are now consolidated under an Executive Vice President who has no concurrent duties as regards the applicant's fossil plant operations. The incumbent in the executive Vice President position is relatively new to TUGCO and brings an extensive background in nuclear plant construction and operations.

Such changes as have occurred since the arrival of the new Executive Vice President are primarily limited to the corporate support organization. These have been documented in a change to the FSAR which is to be submitted for NRC review in the near future.

Based on its brief review, the audit team observed nothing in the organizational revisions that would give cause for concern. A complete evaluation will have to await the submittal of the FSAR amendment.