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NUCLEAR REGULATORY COMMISSION

TEXAS UTILITIES ELECTRIC COMPANY, ET AL.

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 1

DOCKET NO. 50-445

NOTICE OF ENVIRONMENTAL ASSESSMENT AND

FINDING OF NO SIGNIFICANT IMPACT

The Nuclear Regulatory Commission (the Commission or NRC) is considering the issuance of an extension to the latest construction completion date specified in Construction Permit No. CPPR-126 issued to Texas Utilities Electric Company (TU Electric), Texas Municipal Power Agency, Brazos Electric Power Cooperative, Inc., and Tex-La Electric Cooperative of Texas, Inc. (Applicants) for the Comanche Peak Steam Electric Station (CPSES) Unit No. 1 (the facility) located on Applicants' site in Somervell County, Texas.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action: The proposed action would amend the construction permit by extending the latest construction completion date from August 1, 1988 to August 1, 1991. The proposed action is in response to Applicants' request dated June 6, 1988. Construction Permit No. CPPR-127 for the CPSES Unit No. 2 is not affected by this action.

The Need for the Proposed Action: The Applicants state in their request that the proposed action is needed so they can complete the intensive program of review and reinspection which was initiated in the fall of 1984 to provide evidence of the safe design and construction of the CPSES Units No. 1 and No. 2. The remedial program was undertaken by the Applicants to respond to

issues raised by the NRC Staff, the Atomic Safety and Licensing Board (ASLB), and other sources in the operating license proceeding. Although the operating license proceeding was dismissed on July 13, 1988,* the review and reinspection program must still be carried out prior to the CPSES licensing for operation. The Applicants have advised the NRC Staff that they anticipate completion of the remedial program for the CPSES Unit No. 1 before the proposed latest construction completion date, including reinspection efforts, development of essential documentation regarding the adequacy of facility design and construction, and necessary redesign, and modification of affected structures, systems, and components.

Environmental Impacts of the Proposed Action: The environmental impacts associated with construction of the Comanche Peak facility are associated with both units and have been previously evaluated and discussed in the NRC Staff's Final Environmental Statement (FES) related to the proposed CPSES Units No. 1 and No. 2, issued in June 1974, which covered the construction of both units. One of the environmental impacts, groundwater withdrawal, is the subject of a construction permit condition and will be discussed further below.

Since the proposed action concerns the extension of the construction permit, the impacts involved are all non-radiological and are associated with continued construction. There are no new significant impacts associated with the proposed action. The reinspection and modifications required by the

* Based on the ASLB's consideration of a Joint Motion for Dismissal of Proceedings by the Applicants, Intervenor (Citizens Association for Sound Energy), and the NRC Staff and a Joint Stipulation regarding conditions for dismissal, both filed on July 1, 1988, the ASLB issued a Memorandum and Order (Dismissing Proceedings) on July 13, 1988. This same order dismissed the construction permit amendment proceeding relating to the staff's 1986 granting of an extension to the CPSES Unit No. 1 construction permit following an untimely request for extension by the Applicants.

Applicants' remedial program are equivalent to those of a maintenance or repair program. All the remedial program activities will take place within the facility, will not result in impacts to previously undisturbed areas, and will not have any significant additional environmental impact. However, there are impacts that would continue during the completion of facility construction, including the reinspection and modification activities.

The FES identified four major environmental impacts due to the construction of both units. Three of the four major environmental construction impacts discussed in the FES have already occurred and are not affected by this proposed action:

- Construction-related activities have disturbed about 400 acres of rangeland and 3,228 acres of land have been used for the construction of Squaw Creek Reservoir.
- The initial set of transmission lines and the additional planned line as discussed in the FES are complete.
- Pipelines have been relocated and the railroad spur and diversion and return lines between Lake Granbury and Squaw Creek Reservoir have been completed.

The fourth major environmental impact addressed in the FES is the community impact which would continue with the extended construction of the facility. Continuing construction does not involve community impacts different from or significantly greater than those previously considered. However, the community will be impacted for a longer period of time than was previously considered as a result of the proposed action. Activities related to the remedial program have resulted in a temporary increase in the current combined site workforce to approximately 8000, being primarily engineering and technical personnel rather than construction workers. At the present time, this workforce

is basically dedicated to completion of Unit No. 1 and its preparation for operation, with a small percentage of the workforce being devoted to Unit No. 2 activities. The increase is temporary as the Applicants expect the combined workforce to decline as the remedial program nears completion and Unit No. 1 approaches fuel loading (currently planned for June 1989). When Unit No. 1 construction is completed and Unit No. 2 construction is resumed, the workforce dedicated to Unit No. 2 activities is expected to be about 4500. However, the peak workforce for both Units No. 1 and No. 2 combined is not expected to exceed 8000. The Applicants state that about 85% of the current total workforce is contractors and consultants who do not live in the area and use only temporary quarters during the workweek. While the current workforce level has caused a temporary, increased demand for services in the community and increased traffic on local roads, there are no major impacts due to the arrival of workers' families and due to demands for services necessary to support permanent residents (for example, housing and schools).

Another environmental impact discussed in the FES is the continued withdrawal of groundwater, an impact which is the subject of a condition in the construction permit. Continued construction will not have a significant effect on groundwater withdrawal beyond that already considered, even though construction has extended over a longer period of time than the staff originally anticipated. The construction permits for the CPSES Units No. 1 and No. 2 limit groundwater usage for the site to 40 gpm on an annual average basis for the duration of construction. The groundwater usage for 1986 and 1987 has averaged less than half of this amount for the site. Most construction water is being supplied by treated water from the Squaw Creek Reservoir, thus reducing the amount of groundwater being used.

The original construction permits allowed an annual average groundwater withdrawal rate for the site not exceeding 250 gpm for a period of 5 years and then 30 gpm thereafter. In July 1982, the Applicants requested an amendment to the construction permits increasing the allowable annual average groundwater withdrawal rate from 30 gpm to 40 gpm until completion of construction. The increased limit of 40 gpm was established in Amendments No. 6, dated August 27, 1982, to Construction Permits CPPR-126 and CPPR-127 for the CPSES Units No. 1 and No. 2, respectively. The staff evaluation of the increased site limit was predicated on the latest of the CPSES construction completion dates existing at the time, i.e., August 1, 1987 for Unit No. 2 (per Order dated April 30, 1982), or 5 years.* The Applicants' present request to extend the latest construction completion date of Unit No. 1 for 3 years from August 1, 1988 until August 1, 1991 necessitates evaluating the impact of continuing to withdraw groundwater for an additional 3 years at the annual average rate of 40 gpm. The staff has assessed the impact of continued groundwater withdrawal at the CPSES site at an annual average rate of 40 gpm for 5 years in light of the Applicants' April 29, 1987 request, as amended on June 6, 1988, to extend the latest construction completion date of CPPR-127 for Unit No. 2 until August 1, 1992. Consequently, that assessment is repeated herein as it encompasses the period of time for which the Applicants have requested an extension of the Unit No. 1 construction permit.

The Applicants are withdrawing water from the Twin Mountains aquifer which is a confined aquifer in the vicinity of the site. From a geologic cross-section supplied by the Applicants, the Staff determined that the aquifer is

* At that time, the latest construction completion date for Unit No. 1 was August 1, 1985.

about 200 feet thick, with its upper confining layer about 250 feet below the surface. The aquifer still has artesian pressure at the site, but this may change at the present yearly rate of aquifer decline.

The Staff used the Theis non-equilibrium equation in its previous impact assessment of groundwater withdrawal at the site and which is appropriate for this case as well. The non-equilibrium equation should be used only with unconfined aquifers; however, it is expected to give a conservative estimate (over estimate) of drawdown in a confined artesian aquifer. Using the non-equilibrium equation, the staff calculated a drawdown of 2.8 feet at the nearest offsite well (8000 feet from the power block) for a constant pumping rate of 40 gpm over 5 years.

The Staff reviewed water level measurement data from 4 nearby observation wells for the period 1975 to 1987 and determined that even though there was a steady overall decline in water level for all wells, this decline could only partially be attributed to onsite pumping of groundwater. From this review of water level data, the staff could also determine that seasonal fluctuations in water level could be of the order of 3 to 10 feet.

In addition, it should be noted that the original staff impact evaluation for the construction permit was based on a five-year annual average withdrawal rate of 250 gpm or 6.57×10^8 gallons, followed by an annual average rate of 30 gpm until the end of construction, although this was subsequently amended to 40 gpm as discussed earlier. As of July 1, 1987, approximately 5.29×10^8 gallons of groundwater had actually been withdrawn. Five additional years of withdrawal at the rate of 40 gpm would add 1.05×10^8 gallons to the withdrawal, resulting in a total withdrawal of 6.34×10^8 gallons. Hence, total groundwater depletion of the aquifer is still less than that assumed in the original construction permit impact evaluation for the first 5 years of construction.

Based on its evaluation, the Staff has concluded that the calculated impact of continuing to withdraw groundwater at an annual average rate of 40 gpm for the site until August 1, 1991* is negligible and does not result in any significant additional environmental impact. Further, the Staff's conclusion is substantiated by groundwater level data collected at the site during construction and periods of large water withdrawal.

Based on the foregoing, the NRC Staff has concluded that the proposed action would have no significant environmental impact. Since this action would only extend the period of construction activities described in the FES, it does not involve any different impacts or a significant change to those impacts described and analyzed in the original environmental impact statement. Consequently, an environmental impact statement addressing the proposed action is not required.

Alternatives Considered: The NRC Staff has considered that a possible alternative to the proposed action would be for the Commission to deny the request. If this alternative were executed, the Applicants would not be able to complete construction of the facility, resulting in the denial of the benefits to be derived from the production of electric power. This alternative would not eliminate the environmental impacts of construction which have already been incurred. If construction were not completed on Unit No. 1, the amount of site redress activities that could be undertaken to restore the

*In light of the Applicants' April 29, 1987 request, as amended on June 6, 1988 to extend the latest construction completions for CPPR-127, the Staff has previously determined that the impact of continuing to withdraw groundwater at and annual average rate of 40 gpm for the site until August 1, 1992 is negligible and does not result in any significant additional environmental impact.

area to its natural state would be minimal since both Unit No. 1 and Unit No. 2 are essentially complete. This slight environmental benefit would be much outweighed by the economic losses from denial of the use of a facility that is nearly complete. Therefore, the NRC Staff has rejected this alternative.

Alternative Use of Resources: This action does not involve the use of resources not previously considered in the FES.

Agencies and Persons Contacted: The NRC Staff reviewed the Applicants' request and applicable documents referenced therein that support this extension, as well as supplemental information provided. The NRC did not consult with other agencies or persons in preparing this assessment.

Finding of No Significant Impact: The Commission has determined not to prepare an environmental impact statement for this action. Based on the environmental assessment, the Commission concludes that this action will not have a significant effect on the quality of the human environment.

For details with respect to this action, see the Applicants' request for extension dated June 6, 1988, as well as the Applicants' request dated April 29, 1987 related to Unit No. 2 (supplemented on July 22, September 9, and December 3, 1987 and on June 6, 1988), available for public inspection at the

Commission's Public Document Room, 2120 L Street, N.W., Washington, D.C. 20555, and the local public document room at Somervell County Public Library, Glen Rose, Texas 76043.

Dated at Rockville, Maryland this 19th day of October 1988.

FOR THE NUCLEAR REGULATORY COMMISSION

CI Grimes

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