

RELATED CORRESPONDENCE

May 8, 1981

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

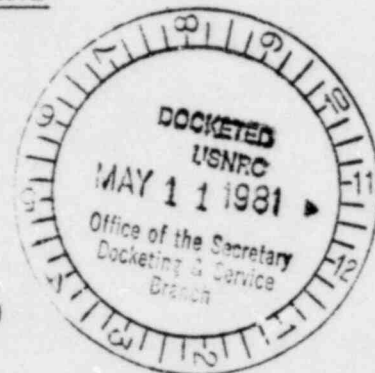
TEXAS UTILITIES GENERATING
COMPANY, et al

(Comanche Peak Steam Electric
Station, Units 1 and 2)

50-445
50-446

Docket Nos. 50-445
50-446

(Application for
Operating license)



CFUR'S SUPPLEMENT TO ANSWERS TO APPLICANTS' FIRST
SET OF INTERROGATORIES TO CFUR AND REQUESTS TO PRODUCE

COMES NOW CFUR, one of the Intervenors in this proceeding and files this Supplement to Answers to Applicants' First Set of Interrogatories to CFUR and Requests to Produce.

To a large extent, complete answers to many of Applicants' Interrogatories are dependent on CFUR receiving proper discovery from the Applicants. Since CFUR has not been able to propound all necessary discovery to the Applicants and since the Applicants have been largely evasive in the discovery completed, CFUR reserves the right to further supplement its answers as may be required by subsequent developments.

SUPPLEMENTARY ANSWERS

Interrogatory 1.

The Applicants have chosen to include in the application for an operating license a number of computer codes to justify, in part, the requirements of 10 CFR §50.57(a). The basis for the codes are most probably stated in a number of reports referenced in the FSAR. The Staff has ostensibly looked at a number of the codes (with associated reports) and evidently put their stamp of approval on these.

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However, a number of the codes (with associated reports) are evidently new and have not been blessed with NRC Staff approval.

In order to verify a mathematical representation of the real world, it is necessary to establish the accuracy of the predictions of the math model as measured from some recognized standard. The most recognized standard is the results of a controlled experiment. The large break series of experiments conducted at the LOFT facility represent one source of experimental data. The small break series conducted at the same site represent a second set of experimental data.

CFUR submits that these results should represent, at least in part, the recognized standard referred to above. Yet, CFUR has seen no reference to any such standard as of yet.

Instances of goofs in the use of computer codes have been experienced — e.g. Surry-2. A large number of codes have not yet been reviewed by the Staff. A review for applicability is clearly inadequate to make the findings required in 10 CFR §50.57(a). Thirty-three codes have been listed as being in this status. Some codes have possibly since been reviewed, but certainly not all.

See Supplement to Petition For Leave To Intervene By Citizens For Fair Utility Regulation (CFUR), May 7, 1979 (Contention 2-A); Report of CFUR's Position On Each Contention; April 10, 1980 (CFUR 2-A); and Transcript of Prehearing Conference April 30, 1980 (CFUR 2-A).

CFUR reserves the right to modify this explanation of Contention 2 after the scope is further defined by the discovery process. See Pennsylvania Power & Light Company and Allegheny Electric Cooperative, Inc. (Susquehanna Steam Electric Station, Units 1 and 2), (ALAB - 613, ___ NRC ___ (September 23, 1980), slip op. at 30.

12. Section 1.6 of the CPSES/FSAR; Amendment 7.
15. Inadequate discovery at this time.
17. Section 1.6 of the CPSES/FSAR, Amendment 7.
20. Inadequate discovery at this time.
23. Inadequate discovery at this time.
24. Demonstrate absolute accuracy of the prediction of the computer codes. Prove that the physical realm of operation is replicable and predictable in accordance with what is stated in the report and/or computer code.
25. See response to Interrogatory 24 (as supplemented).
26. In order to verify a mathematical representation of the real world, it is necessary to establish the accuracy of the predictions of the math model as measured from some recognized standard. The most recognized standard is the results of a controlled experiment. Both large and small break experiments have been conducted at the LOFT facility. CFUR contends that the results of these experiments should represent, in part, the recognized standard referred to above.

See answers to Interrogatory 1; IEEE Std. 100-1977 and IEEE Std. 268-1979; 10 CFR §50.34(b).

27. Provide suitable verification to Staff with proof.
28. Check to insure that the absolute accuracy of the predictions of the computer codes are as claimed by Applicants. This would often entail independent verification.
29. The only way for the reports and codes to be used in the regulatory process is for the Applicants to prove suitable verification and the NRC Staff to evaluate the proof and independently verify the results.

30. See responses to 24 and 27 (as supplemented).
31. See responses to 25 and 28 (as supplemented).
32. See responses to 26 and 29 (as supplemented).
33. The term "conclusions" refers to final decisions, reasoned deductions or reasoned inferences both prospective and retrospective in nature.

Taken in context with the statement "thus conclusions based upon these computer codes are invalid," the term "conclusions" refers in particular to prospective reasoned deductions or inferences reached from use of the computer codes which would lead to erroneous final decisions.

The conclusions CFUR is most concerned with are those to be made by the Hearings Examiner in regard to compliance with 10 CFR §50.57(a).

However, CFUR does not acknowledge the validity of any conclusion, retrospective or prospective, based on computer codes incorporating reports not suitably verified and formally accepted -- whether they are or have been made by the Applicants, Staff or anyone else.

34. See response to Interrogatory 33 (as supplemented).
35. The only way conclusions can be valid is if the premises upon which the conclusions are based are proper and verifiable.
39. Inadequate discovery at this time.
- 40c. See response to Interrogatories 12 and 17.
46. CFUR has had inadequate discovery to determine the Applicants' intended meaning of "review" in Interrogatory 43 and is therefore unable to answer that Interrogatory and Interrogatory 46, which is conditioned on Interrogatory 43, at this time.

49. Since CFUR does not know Applicants' purpose as referenced in Interrogatories 47 and 48, CFUR has insufficient knowledge to answer Interrogatory 49 which is conditioned on Interrogatories 47 and 48.
52. Inadequate discovery at this time.
54. See response to interrogatory 52 (as supplemented).
56. See response to Interrogatory 52 (as supplemented).
61. Unknown at this time.
62. Inadequate discovery at this time.
63. Is the absence of clarification by the Applicants, CFUR construes "NRC requirements" in the context of this Interrogatory to mean Code of Federal Regulations. 10 CFR §50.34; 10 CFR §50.57 and 10 CFR §50, Appendix A. While there are probably other sections which Applicants have not satisfied in this context, CFUR is not aware of them at this time.

Interrogatory 93.

Based on the current status of discovery, CFUR provides the following "specification or refinement of the broadly identified issues" of Contention 7:

Foreign material (including loose rock) thrown into the excavation prior to the pouring of concrete has jeopardized the ability of CPSES to withstand seismic disturbances as described elsewhere in the FSAR because air pockets may exist due to the presence of such foreign material.

CFUR reserves the right to modify this explanation of Contention 7 after the scope is further defined by the discovery process. See Pennsylvania Power & Light Company and Allegheny Electric Cooperative, Inc. (Susquehanna Steam Electric Station, Units 1 and 2), ALAB-613, ___ NRC ___ (September 23, 1980), slip op. at 30.

98. Members of CFUR and its attorneys have conducted meetings with respect to Contention 7. The purposes and the results of those meetings were to formulate the issues to be encompassed by that Contention; prepare discovery on that Contention, and to discuss the ramifications of any facts disclosed. These meetings have taken place over a period of time beginning shortly before Contention 7 was submitted by CFUR. There are no records of those meetings to pinpoint the dates. Other than CFUR members, its attorneys, and other parties and their attorneys, the only persons present during such meetings were George Clancy and C. A. Thetford.
104. Applicants must determine the amount and location of loose rock and other material incorporated into the foundation of CPSES, determine the location and size of any air pockets formed, determine how the above have altered the physical properties of the CPSES structure, modify and verify all applicable computer codes to account for the structural changes in the CPSES structures, and conduct further seismic analysis.
105. See response to Interrogatory 116 (as supplemented).
108. Inadequate discovery at this time and inadequate time to perform other necessary preparations of data to respond to the related Interrogatories.
111. Inadequate discovery at this time.
- 112c. Inadequate discovery at this time.
- 112e. Due to the overexcavation of the bedrock beneath the foundation of CPSES, CFUR suspects that to save money through the use of less concrete, Applicants incorporated loose rock and other material into the foundation of CPSES.
- 112f. See response to Interrogatory 112e (as supplemented).
114. Inadequate discovery at this time.


115. Yes. As set out in the responses to Interrogatories 104, 112 and 116 (as supplemented), incorporation of loose rock and other foreign material and the formation of air pockets in the CPSES foundation will affect the static, dynamic and engineering properties of the CPSES structures.
116. Since loose rock, air pockets and other foreign material have different structural properties than does solid concrete, their incorporation and formation in the foundation of CPSES will affect the static, dynamic and engineering properties of the structure.
118. Loose rock, air pockets and other foreign material modify the determination of the static and dynamic engineering properties of the material underlying the site.
120. See responses to Interrogatories 104 and 112 (as supplemented).
121. Because there appears to be extraordinary fissure repair CPSES, CFUR suspects that Applicants' computer codes do not adequately predict the behavior of the CPSES during an earthquake. Contention 7 is broader than fissure repair.
122. Yes. Should surface or subsurface subsidence, uplift or collapse occur beneath CPSES, the presence of loose rock and other material and the formation of air pockets in the foundation of CPSES will adversely affect the static, dynamic and engineering properties of CPSES.
123. See response to Interrogatory 116 (as supplemented).
125. Inadequate discovery at this time.
127. Inadequate discovery at this time.
129. Inadequate discovery at this time.
132. Inadequate discovery at this time.

133, 135, 136, 138, 139, 143a, 143c, 144, 145, 146, 147, 148, 149, 150, 151, 153, 154, 155, 158, 160, 161, 163, 164, 165, and 167.

CFUR is unable to proceed further at this time with responses to Applicants' Interrogatories addressed to Contention 8. If it becomes able to proceed, CFUR will provide responses to Applicants' Interrogatories addressed to Contention 8 as soon as practicable.

CERTIFICATE

I declare (or certify, verify or state) under penalty of perjury that the preceding CFUR's SUPPLEMENT TO ANSWERS TO APPLICANTS' FIRST SET OF INTERROGATORIES TO CFUR AND REQUESTS TO PRODUCE are true of my own knowledge except as to matters therein stated on information and belief, and as to that, I believe them to be true.



RICHARD L. FOUKE

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	§	
	§	
TEXAS UTILITIES GENERATING	§	Docket Nos. 50-445
COMPANY, <u>et al</u>	§	50-446
	§	
(Comanche Peak Steam Electric	§	(Application for
Station, Units 1 and 2)	§	Operating License)

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing "CFUR's SUPPLEMENT TO ANSWERS TO APPLICANTS' FIRST SET OF INTERROGATORIES TO CFUR AND REQUESTS TO PRODUCE" were served upon the following persons by deposit in the United States mail, first class postage prepaid this 8th day of May, 1981:

Valentine B. Deale, Esq.
Chairman, Atomic Safety and
Licensing Board
1001 Connecticut Avenue, N.W.
Washington, D.C. 20036

Chairman, Atomic Safety
and Licensing Board Panel
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Nicholas S. Reynolds, Esq.
Debevoise & Liberman
1200 - 17th Street, N.W.
Washington, D.C. 20036

Chairman, Atomic Safety and
Licensing Appeal Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Forrest J. Remick, Member
Atomic Safety and Licensing
Board
305 E. Hamilton Avenue
State College, Pennsylvania 16801

Marjorie Ulman Rothschild, Esq.
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Richard Cole, Member
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

David J. Preister, Esq.
Assistant Attorney General
Environmental Protection Division
P. O. Box 12548
Capitol Station
Austin, Texas 78711

Mr. Richard L. Fouke
CFUR
1668B Carter Drive
Arlington, Texas 76010

Jeffery L. Hart, Esq.
4021 Prescott Avenue
Dallas, Texas 75219

Mr. Chase R. Stephens
Docketing & Service Branch
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Mrs. Juanita Ellis
President, CASE
1426 South Polk Street
Dallas, Texas 75224

Mr. Geoffrey M. Gay
West Texas Legal Services
100 Main Street (Lawyers Building)
Fort Worth, Texas 76102

Mr. Arch C. McColl, III
The Katy Building, Suite 302
701 Commerce Street
Dallas, Texas 75202

Richard L. Fouke

RICHARD L. FOUKE