UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION



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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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| In the Matter of<br><br>APPLICATION OF TEXAS UTILITIES GENERATING COMPANY, ET AL. FOR AN OPERATING LICENSE FOR COMANCHE PEAK STEAM ELECTRIC STATION UNITS #1 AND #2 (CPSES) | Docket Nos. 50-445 and 50-446 |

CASE'S ANSWERS TO APPLICANTS' THIRD SET OF INTERROGATORIES TO CASE AND REQUESTS TO PRODUCE

Pursuant to 10 CFR 2.740b(b), CASE (Citizens Association for Sound Energy), Intervenor herein, hereby submits its Answers to Applicants' Third Set of Interrogatories to CASE and Requests to Produce, served February 26, 1982 and received by CASE 3/2/82. CASE will respond to the Applicants' Request to Produce in this instant pleading as well.

ANSWERS TO APPLICANTS' THIRD SET OF INTERROGATORIES AND REQUESTS TO PRODUCE

1. We note that this is the same Question asked in Applicants' First Set to CASE dated August 1, 1980, as Question 7. Our answer is still the same as set forth in our 12/1/80 Supplement to CASE's Answers to Applicants' First Set of Interrogatories and Requests to Produce:

   "At this time, CASE has not prepared or caused to be prepared any report, study, or analysis on which we intend to rely for its position regarding contention 5... Our present plans are to file testimony, call witnesses, and cross-examine Applicants regarding (this) contention, and to participate as fully as possible in the hearings. Who CASE's specific witnesses will be is unknown at this time. When and as such agreements and decisions are made, the Board and all parties will be kept informed in accordance with requirements of 10 CFR 2.740(e)."

2. Same as Applicants' First Set, Question 8, answered in our 12/1/80 Supplement. Answer is same as in second paragraph of 1. above.

3. Same as Applicants' First Set, Question 9.b., answered in our 12/1/80 Supplement. We have not gone beyond our analysis as presented in our 12/1/80 answer at this time. However, we are in the process of making such analysis and will supplement our answer as soon as it is completed.

4. Same as Applicants' First Set, Question 13.a, answered in our 12/1/80 Supplement.

In preparing our answers to the NRC Staff's Fourth Set, filed yesterday, we assembled the following additional information:

We are in the process of assembling and consolidating documents in this regard and do not yet have it completed. However, we have already identified the following and offer it as a partial listing:

| 10 CFR Part 50, Appendix B, Criterion No. | Inspection & Enforcement Report No. |
|---|---|
| I | 73-02, 74-01 |
| II | 73-02, 74-01, 79-11 |
| III | 73-02, 74-01 |
| IV | 73-02, 74-01 |
| V | 73-02, 74-01, 75-10, 75-11, 76-01, 76-08, 76-07, 77-02, 78-05, 78-11, 78-12, 78-13, 78-18, 79-03, 79-04, 79-06, 79-07, 80-01, 80-03, 80-08, 80-11, 80-13, 80-15, 80-17, 80-20, 80-23, 81-02, 81-15 |
| VI | 73-02, 74-01, 75-05, 76-08, 77-10 |
| VII | 73-02, 74-01 |
| IX | 77-10 |
| XV | 78-12 |
| XVI | 75-13 |
| XVII | 73-02, 74-01 |
| XVIII | 74-01 |

5. We object to this question to the following extent. Applicants have obviously gone down the list of specific items listed in the contention as presently worded. As Applicants are well aware, the wording of Contention 5 as presently constituted was not CASE's wording. CASE and the other two Intervenors in these proceedings were initially accepted under the wording "The Applicant has failed to establish and execute a quality assurance/quality control program which adheres to the criteria in 10 CFR 50, Appendix B." CASE and the other two Intervenors fought to retain that wording (see especially CASE's 5/12/80 Motion in Support of Retaining Present Wording of Quality Assurance/Quality Control Contention).

5. (continued):

As stated in our 5/12/80 Motion:

> "The broadness of CASE's concerns in regard to this contention are clearly indicated in our 5/7/79 Contentions (pages 50 through 57), and we particularly call the Board's attention to page 57, items 18 and 19, in which we state:
>
> > 'Non-compliance with regulations and procedures as detailed in the I&E reports supports and confirms Contention No. 1.'
> >
> > 'I&E reports, plus the contentions in Contention No. 1, clearly indicate a trend which would prove that 10 CFR 50.57(a)(2), (3), and (6) will not be complied with by the applicant. Therefore, the CPSES should not be licensed to operate.'
>
> "And on page 54, item 7, we state:
>
> > 'There are numerous other problems with construction and procedures which are indicated in the I&E reports, and CASE would incorporate them all herewith by reference. It is our intention to pursue them in detail during the hearings, and to present related testimony by expert witnesses.'"

We then suggested alternative wording for the contention which the Board did not adopt, and further elaborated our concerns:

> "As has been previously indicated, CASE very seldom has the benefit of any legal advice. We believe that we have made it very clear that there are certain specific problems at CPSES with which we are concerned, but in addition, we are concerned as well with the overall impact of such problems, coupled with the manner in which the Applicant has operated its lignite plants and the manner in which we expect them to operate CPSES. All of these things have a bearing and tie-in with the quality assurance/quality control contention.
>
> "We are concerned primarily with the Board's deciding on wording for this contention which accurately reflects CASE's concerns and which will not limit us (as the Applicant's proposed wording would have) to an extent which would preclude our pursuing some of these concerns as indicated."

We therefore object to these questions to the extent that they call for definitions of terms or identification of specific items which were not originally our terms or specific items. However, we will attempt to respond to the best of our ability to all of the questions, based on the analyses we have made at this time and in the context in which we have analyzed them at this time. It should be noted that we are currently in the process of refining the specific areas with which we will deal in the hearings and the specific approach we will take the the various issues with which we are concerned.

5.a. Concrete Work:

We are currently reviewing the following items from ACORN's and CFUR's pleadings; it is our present thinking that although the specific wording of the contention was not CASE's wording but was taken in many instances from pleadings of ACORN and CFUR as well, many of the other two Intervenors' concerns came from I&E reports. CASE has always said that we intended to pursue all the I&E Reports in these proceedings. We will therefore adopt most of the concerns expressed by ACORN and CFUR as our own, since they do indeed supplement and support many of our own concerns.

From the 5/7/79 Supplemental Petition and Contentions of Intervenors, ACORN, Mary and Clyde Bishop and Oda and William Wood, pages 15, 16, and 17, items 31, 32, 35, 36, 37, 38.

From CFUR's 5/7/79 Supplement to Petition for Leave to Intervene by Citizens for Fair Utility Regulation (CFUR), pages 13, 14, 15 and 16, item IV.E.

From the 5/7/79 Supplement to Petition for Leave to Intervene and Contentions by CASE (Citizens Association for Sound Energy), pages 50, 53, and 54, items 1, 2, 4.

(The above-referenced items are quoted in CASE's 3/15/82 Answers C5-10 to NRC Staff's Fourth Set of Interrogatories to Intervenor CASE; we did not want to repeat them here since to do so would unnecessarily burden the record and since, although pertinent, they are not exactly what you asked for.)

Since the above was originally written in 1979, the problems with concrete have continued at CPSES. These problems have been documented by I&E Reports, including but not limited to the following, which is a sampling of reports over the years:

I&E Report 75-13 -- Failure to Implement Prompt Corrective Action and Provide Adequate Measures to Preclude Repetition Regarding Concrete Aggregates
I&E Report 75-10 -- Failure to Adhere to Procedure Requirements Regarding Concrete Placement
I&E Report 75-10 -- Failure to Adhere to Procedure Requirements Regarding Concrete Transit Mix
I&E Report 79-03 -- Failure to Follow Concrete Placement Procedure
I&E Report 78-13 -- Failure to Follow Concrete Testing Procedures
I&E Report 78-07 -- Failure to Follow Concrete Testing Procedures
I&E Report 80-08 -- Failure to Report a Significant Construction Deficiency ("honeycombs" in interior walls of Unit II Containment Building)
I&E Report 79-11 -- Failure to Implement the Quality Assurance Program for Civil Construction (Placement of an undetermined amount of concrete of an unknown quality on the dome of the Unit 1 containment without the knowledge of Applicants' Quality Assurance organization and without benefit of required inspections and testing of the concrete)
I&E Report 79-09 -- Allegations by former Comanche Peak employees which appeared in news articles of the FORT WORTH STAR-TELEGRAM on April 4, 5, 6, and 8, 1979 (it was not possible to either substantiate or refute several of the allegations)
I&E Report 79-09 also included the following information on pages 34 and 35:

5.a. (continued):

"Referenced NRC Reports

"Because of the congruity of matters being investigated, the IE Investigation Reports No. 50-445/77-02; 50-446/77-02, dated March 23, 1977, and 78-07, dated May 10, 1978, are by reference, an integral part of this report. In addition, the following IE Inspection Reports and corresponding licensee replies are referenced for additional information regarding IE concrete inspection activites:

IE Inspection Report 50-445/75-06; 50-446/75-06, dated April 28, 1975

IE Inspection Report 50-445/75-07; 50-446/75-07, dated June 11, 1975

IE Inspection Report 50-445/75-09; 50-446/75-09, dated July 14, 1975

IE Inspection Report 50-445/75-10; 50-446/75-10, dated August 7, 1975

IE Inspection Report 50-445/75-11; 50-446/75-11, dated August 28, 1975

IE Inspection Report 50-445/75-12; 50-446/75-12, dated October 1, 1975

IE Inspection Report 50-445/75-13; 50-446/75-13, dated December 12, 1975

IE Inspection Report 50-445/76-03; 50-446/76-03, dated April 1, 1976

IE Inspection Report 50-445/76-04; 50-446/76-04, dated April 20, 1976

IE Inspection Report 50-445/76-05; 50-446/76-05, dated May 26, 1976

IE Inspection Report 50-445/76-06; 50-446/76-06, dated June 25, 1976

IE Inspection Report 50-445/76-07; 50-446/76-07, dated August 3, 1976

IE Inspection Report 50-445/76-08; 50-446/76-08, dated August 19, 1976

IE Inspection Report 50-445/76-10; 50-446/76-10, dated October 14, 1976

IE Inspection Report 50-445/76-11; 50-446/76-11, dated November 2, 1977

IE Inspection Report 50-445/76-12; 50-446/76-12, dated January 3, 1977

IE Inspection Report 50-445/77-03; 50-446/77-03, dated March 31, 1977

IE Inspection Report 50-445/77-04; 50-446/77-04, dated May 17, 1977

IE Inspection Report 50-445/77-06; 50-446/77-06, dated May 27, 1977

IE Inspection Report 50-445/77-07; 50-446/77-07, dated July 7, 1977

IE Inspection Report 50-445/77-09; 50-446/77-09, dated September 6, 1977

5.a. (continued):

IE Inspection Report 50-445/77-10; 50-446/77-10, dated October 18, 1977

IE Inspection Report 50-445/77-11; 50-446/77-11, dated November 2, 1977

IE Inspection Report 50-445/78-01; 50-446/78-01, dated January 30, 1978

IE Inspection Report 50-445/78-09; 50-446/78-09, dated June 6, 1978

IE Inspection Report 50-445/78-11; 50-446/78-11, dated June 29, 1978

IE Inspection Report 50-445/78-13; 50-446/78-13, dated September 18, 1978

IE Inspection Report 50-445/78-16; 50-446/78-16, dated November 17, 1978

I&E Inspection Report 80-01 -- Further information regarding "honeycombs" in interior walls of Unit II containment building. Further removal of the "honeycomb" was suspended pending an in-depth investigation and engineering review since the area and depth appeared to be exceeding expected levels. Applicants utilized the services of a consultant, Meunow and Associates, to attempt, by microseismic means, to obtain information on the total extent of the problem. According to the statement of the RRI in the inspection report "...the microseismic (sonic) investigative technique is unique to the consultant, Mr. Meunow, who developed it and is the only known person able to interpret the oscillographic data obtained." (Emphasis added.)

One of the most troubling aspects of the continuing concrete (and other) problems at CPSES, to CASE, is the tendency of Applicants and NRC Staff to say that Applicants won't do it again, without really thoroughly examining what has already been done. Another troubling aspect is the lack of a consistent QA/QC program which allows tracking down each and every problem area back to its roots. And over and above this one particular problem area, our primary and continuing concern is the trend of the type of work being done at the plant and the continuing breakdown of the entire QA/QC program.

With regard to Applicants request that we "specify time of occurrence, location and specific problem alleged for each practice," we have not made an analysis of this type and in this particular context at this time. If and when we do, we will promptly supplement our answers.

We are also in the process of reviewing audit reports which we recently received from the Applicants in response to our interrogatories and requests to produce, as well as the document "Review of the Quality Assurance Program for the Design and Construction of the Comanche Peak Steam Electric Station," prepared by F. B. Lobbin, February 4, 1982, which we just received yesterday, 3/15/82. It may well be that we will also find other information in those documents which are pertinent to this question; however, at this time, we have not fully analyzed them.

5.b. Mortar Blocks

We believe the "mortar blocks" referred to in the contention was taken from the 5/7/79 Supplemental Petition and Contentions of Intervenors, ACORN, Mary and Clyde Bishop and Oda and William Wood, pages 16 and 17, items 33, 34, 35, 36, 37, and 38. (These items were quoted in our 3/15/82 Answer to NRC Staff's Fourth Set, C5-11.)

Since these items include problems identified in Inspection and Enforcement Reports, we will be pursuing them as our own; however, we have not made an analysis at this time which specifically identifies them in groupings by "mortar blocks" per se.

See last three paragraphs of answer 5.a., page 6, of this pleading.

5.c. Steel

We believe the "steel" referred to in Contention 5 was taken from the 5//7/79 Supplement to Petition for Leave to Intervene by Citizens for Fair Utility Regulation (CFUR), pages 11 and 12, item IV.C. (This item was quoted in our 3/15/82 Answer to NRC Staff's Fourth Set, C5-12.)

Since this item includes problems identified in Inspection and Enforcement Reports, we will be pursuing them as our own; however, we have not made an analysis at this time which specifically identifies them in groupings by "steel" per se.

See last three paragraphs of answer 5.a.,page 6, of this pleading.

5.d. Fracture Toughness Testing

We believe the "fracture toughness testing" as the phrase is used in the contention came from the 5/7/79 Supplement to Petition for Leave to Intervene by Citizens for Fair Utility Regulation (CFUR), pages 16 and 17, item IV. (This item was quoted in our 3/15/82 Answer to NRC Staff's Fourth Set, C5-13.)

This item refers to the agreement between Westinghouse and Texas Utilities (which we may obtain from CFUR and pursue further) as well as an I&E Report. We will therefore probably pursue it as our own; however, we have not made an analysis at this time which specifically identifies groups as "fracture toughness testing" per se.

See last three paragraphs of answer 5.a., page 6, of this pleading.

5.e. Expansion Joints

We believe the "expansion joints" referred to in Contention 5 came from two separate sources about basically the same problem: From the 5/7/79 Supplement to Petition for Leave to Intervene by Citizens for Fair Utility Regulation (CFUR), page 16, item IV.; and from the 5/7/79 Supplement to Petition for Leave to Intervene and Contentions by CASE (Citizens Association for Sound Energy),

5.e. (continued):

page 50:

"1. CASE has been told by a worker at the CPSES that one side of the reactor, where there is supposed to be some room between the containment vessel and the reactor, workers could not get the expansion joints to work correctly and poured concrete in on one side where the expansion joints are supposed to be."

In CFUR's pleading (which was quoted in our 3/15/82 Answer to NRC Staff's Fourth Set, C-14), they express basically the same concern and specify that it was between the Auxiliary Building and Containment Unit 2 (KA wall and LA wall).

We have not yet discussed this further with CFUR but will probably do so and decide whether and how best to pursue it. We have not yet made this decision and have not made an analysis at this time which specifically identifies groups as "expansion joints" per se.

See last three paragraphs of answer 5.a., page 6, of this pleading.

5.f. Placement of the Reactor Vessel for Unit 2

We believe the "placement of the reactor vessel for Unit 2" referred to in the contention came from: the 5/7/79 Supplemental Petition and Contentions of Intervenors, ACORN, Mary and Clyde Bishop and Oda and William Wood, pages 22 and 23, item 58; and from the 5/7/79 Supplement to Petition for Leave to Intervene and Contentions by CASE (Citizens Association for Sound Energy), page 54, item 6 and page 23, item 2.

(These were quoted in our 3/15/82 Answer to NRC Staff's Fourth Set, C5-15.)

5.f. (continued):

As we understand it, basically what happened was that Applicants' response to the problem was to innovatively decide that they would build the support structure 45° away from where it was so that things would line up, even though this is not the way the plant was designed. They then came up with specifications to build the new supports.

Before the supports had been completed, an NRC inspector came by and decided to take a closer look. He noted that the hole drilled where the steel bar was to provide structural strength was smaller than the specifications called for. He also inquired as to why Texas Utilities had not reported the additional difficulty of the reactor vessel's not fitting to the NRC. The utility reply insofar as to why they had not yet reported anything to the NRC was that nothing had actually been installed and therefore there was no "deviation." The utility reply insofar as the undersized hole was that they would have to check that out with their architect/engineer. The architect/engineer obligingly changed the specifications so that the undersized hole was acceptable insofar as specifications were concerned.

Apparently now everyone (the Applicants and the NRC regulators) was satisfied. But many other things had to be changed as a result of this misorientation and is apparently indicative of similar procedures with other aspects of the plant's construction, whereby if something's not done according to specifications, you simply change the specifications so that everybody's happy = regulation. This is one of the most troubling aspects, to CASE, of the manner in which CPSES has been constructed.

The time frame during which this took place is very important: it was "reported to the RRI on February 20, 1979, that a major error had been detected in the design of the Unit 2 reactor vessel support structure."[2] The work appears to have been completed prior to August 1, 1979. However, in I&E Report 80-25 (which, according to NRC Staff's answers to our interrogatories, is the "last documented 'SAPL' (Systematic Assessment of Licensee Performance)" which "was conducted at Comanche Peak"), which covers the period August 1, 1979, through July 31, 1980, it was stated:[3]

> "Licensee Construction and Engineering Management - The NRC personnel stated that it appears there is a continuing tendency to engineer away construction problems rather than enforce compliance to drawings and specifications."
>
> "Brown and Root Construction Supervision and Labor Force - The NRC participants indicated that their impression of this area indicated that there is a need to make this group more aware of nuclear power plant construction requirements."
>
> (Emphases added.)

CASE's concern about the misorientation of the reactor pressure vessel is shared by others. It is discussed at some length in House Report No. 97-277, October 20, 1981, "Licensing Speedup, Safety Delay: NRC Oversight, Ninth Report by the Committee on Government Operations," prepared by Congressman Toby Moffet's Environment, Energy, and Natural Resources Subcommittee. A copy of this report was sent to all parties by CASE with its 11/2/81 Transmittal of Additional Information.

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[2] See I&E Report 79-03.

[3] See page 10 of this pleading.

5.f. (continued):

The report stated regarding Comanche Peak (we have marked the portion pertaining specifically to the misorientation problem):



## E. Comanche Peak

One more plant not yet discussed in this Chapter was on the industry-touted lists of NRC delay but now is not expected to be delayed by the licensing process. That is the Comanche Peak facility being built by Texas Utilities Generating Company. When the Comanche Peak construction permit was issued in December 1974, its projected fuel load date was June 1979.[112] Since that time, some 30 months of slippage have already occurred based on the utility's official claim that construction will be complete December 1981. As already noted, the NRC expects another twelve months of slippage to be announced by the utility, making total slippage at least 42 months and eliminating any projected NRC delay.[113]

A brief look at the Comanche Peak history discloses a sadly familiar saga of construction, financial and safety problems. Texas Generating's schedule has already been altered four times, beginning in 1976, again in 1977, in late 1979 and in 1980. In 1977, "rescheduled commercial operation" was given as a reason. No official reason was reported to the NRC for the other schedule revisions.[114]

NRC documents on Comanche Peak show far more than those cryptic entries, however. Comanche Peak has been plagued by construction problems reminiscent of the Marble Hill and Zimmer difficulties. Faulty welding practices resulted in the rewelding of some 60 percent of the safety-related welds at one point in the construction.[115] Poor quality concrete with excessive "honeycombing" (hole and porousness in the concrete that weaken it) have required extensive rework. In one instance, concrete of unknown and untested quality was poured on the dome of the containment building without proper inspection.[116] NRC inspectors discovered that Brown & Root, the building contractor, had excessively blasted with dynamite and "overbroken" the bedrock around the foundation perimeter.[117] The bedrock was intended to be the solid foundation for the containment and the reactor. That construction error require additional grouting and concrete work to repair and resolidify the foundation.[118]

A particularly troublesome and costly construction error was made by Texas Generating and its contractors at the Comanche Peak site in early 1979. Simply put, a major misreading of the design for Unit 2 resulted in the support structures for the reactor being built in the wrong place.[119] It should be noted that this costly and ultimately time-consuming error by the utility and its contractors occurred on Unit 2, not on Unit 1. It is the latter unit which the industry has alleged was being delayed by the NRC. The realities of nuclear powerplant construction, however, are that major additional workloads on the building contractors, design engineers and top management of the utility—from whatever part of the overall project—inevitably contribute to the total construction burden and difficulty of meeting time and cost

[112] Hearings, at Appendix, answer 2B attachment.
[113] Id.
[114] Id.
[115] This discussion of the Comanche Peak case comes from NRC Inspection and Enforcement documents in that licensing case, NRC docket No. 50-445 and 50-446.
[116] Id.
[117] Id.
[118] Id.
[119] Id.

schedules, as this case demonstrates. The NRC reported the construction error in March 1979:

> It had been determined that the reactor vessel support shoes, their ventilation duct work, and the surrounding reinforcing steel had been rotated forty-five degrees from the correct position through a design error. As a result of the error, the reactor vessel would not match the vessel support feet nor would the piping system to the other reactor loop components.[120]

Major design and construction changes were of course required to correct the error. Not only did new structures have to be built so that the reactor could fit into place and all the piping would fit, it was also necessary to build additional support structures to support the reactor in the right places. Again, as the NRC described the process later in March 1979:

> The reactor vessel concrete support structure is misoriented approximately forty-five degrees. By design, the reinforcing steel, which supports the reactor vessel support plates, is of a greater design strength than the reinforcing steel which is beneath the unsupported reactor vessel nozzles. Therefore, there will be a loss of shear strength in those areas where the concrete base for the steel support plates are to be relocated. Hence, the design repairs have centered on the placement of additional shear reinforcement in the areas where the steel support plates are to be relocated.[121]

In addition to causing direct delays in construction this misalignment error has fueled the ardor of those citizens living near the Comanche Peak site who have intervened in the case because they have some doubt about the competence of the utility and its contractors.[122]

In sum, the Committee review of those plants other than Diablo Canyon which the industry has claimed were being delayed by the NRC shows either that they are not being delayed by the NRC or that any delay is minimal, particularly in comparison to the extensive delays attributable to the utilities themselves and to the nuclear marketplace. Diablo Canyon's two units stand as the one example worthy of some further examination where the NRC can be said to be the source of "delay." The bases for that NRC delay, however, are far from spurious, as the Committee review shows.

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[120] Id.
[121] Id.
[122] The competence of Brown & Root as a nuclear constructor has also been examined in the context of the South Texas Project in Hearings before the Oversight and Investigations Subcommittee of the House Energy and Commerce Committee, 96th Cong., 2d sess.

5.f. (continued):

The misalignment error is symptomatic of a much broader and all-encompassing problem, CASE believes -- the complete breakdown of the quality assurance/quality control program at Comanche Peak. It raises grave questions about the way the plant has been built and about the ability of the Applicants to construct and operate the plant safely. Further, and equally important, it raises grave doubts about the NRC's regulatory functions and abilities to protect the public health and safety as they are mandated to do. How can the NRC now say that everything's fine at CPSES when, by its own statements in its own regional evaluation (the last documented Systematic Assessment of Licensee Performance), "it appears there is a continuing tendency to engineer away construction problems rather than enforce compliance to drawings and specifications," and "there is a need to make this group (Brown and Root Construction Supervision and Labor Force) more aware of nuclear power plant construction requirements"? What about the work which was done prior to what we assume the NRC believes to be the discontinuance of the "continuing tendency to engineer away construction problems" and the making aware of the Brown and Root Construction Supervision and Labor Force of nuclear power plant construction requirements? (It should be pointed out that there is no documentation at this time that these problems have actually been solved, since according to the NRC Staff's own answers to our interrogatories, the October 30, 1980, NRC regional evaluation is the last documented Systematic Assessment of Licensee Performance.)

See last three paragraphs on page 6 of this pleading.

5.g. We believe the "welding" referred to in the contention came from:

The 5/7/79 Supplemental Petition and Contentions of Intervenors, ACORN, Mary and Clyde Bishop and Oda and William Wood, page 17, items 37 and 38.

The 5/7/79 Supplement to Petition for Leave to Intervene by Citizens for Fair Utility Regulation (CFUR), pages 9, 10, and 11, item IV.B.

The 5/7/79 Supplement to Petition for Leave to Intervene and Contentions by CASE (Citizens Association for Sound Energy), pages 50, 51, 52, and 53, item 3.

The preceding were quoted in CASE's 3/15/82 Answers to NRC Staff's Fourth Set, C5-16.

Since the preceding was written, the problems with welding at CPSES have not ceased. It should also be noted that in response to CASE's 12/4/80 Third Set of Interrogatories to Applicants, the following responses were received:

> "Question 11.c.: Is it the standard modus operandi for work being done on the containment wall about 150' above the ground to be done with no scaffolding?
>
> "Answer: Yes. Although work platforms and safety belts are provided, it is common for work to be accomplished within the confines of the rebar without scaffolding.

5.g. (continued):

"Question 11.f.: Was the procedure referenced in c. above the practice at the time that similar work was done on the Unit 2 containment wall?

"Answer: Yes.

"11.g.: Is it the standard modus operandi for work being done on the containment wall about 150' above the ground to be done with only site area lighting available?

"Answer: Yes. However, area lighting is normally supplemented by lighting mounted on a work platform at the surface of the concrete, which in the subject situation, was approximately 60 feet below the level of the cadwelds. In a small percentage of the cadwelding activities (such as the subject situation) flashlights are also used to better light the work area.

"11.j.: Was the procedure reference in g. above the practice at the time that similar work was done on the Unit 2 containment wall?

"Answer. Yes.

"11.k: Is it the standard modus operandi for splice setup work being done on the containment wall about 150' above the ground to be done with the aid of flashlights?

"Answer: Yes, as explained above in response to interrogatory 11.g.

"11.n.: Was the procedure referenced in k. above the practice at the time that similar work was done on the Unit 2 containment wall?

"Answer: Yes.

"11.o.: Is it the standard modus operandi for work being done on the containment wall about 150' above the ground to be inspected with a penlight?

"Answer: Penlights are furnished to inspectors to aid inspection efforts in areas where supplemental lighting may be necessary.

"11.r.: Was the procedure reference in o. above the practice at the time that similar work was done on the Unit 2 containment wall?

"Answer. Yes."

Problems with welding have been documented by I&E Reports, including but not limited to the following:

I&E Report, NRC Inspections on August 21-25, 1978 -- Failure to Follow Welding Procedures
I&E Report, NRC Inspections on August 21-25, 1978 -- Failure to Follow Weld Monitoring Procedures
I&E Report 78-18 -- Failure to Follow Welding Procedures
I&E Report 78-12 -- Failure to Follow Welding Procedure
I&E Report 77-10 -- Failure to Remove weld Surface Defect Prior to Final Acceptance

5.g. (continued):

I&E Report 77-10 -- Failure to Provide Welding Procedures at the Location Where the Prescribed Activity Is Performed

I&E Report 76-07 -- Failure to Follow Procedures for Welding of Safety Related Components

I&E Report 76-07 -- Failure of QA Supervisor to Exercise Delegated Stop-Work Authority Regarding Welding of Safety Related Components

I&E Report 80-01 -- Failure to Provide Instructions and Procedures Appropriate to the Circumstances (Instructions and Procedures Provided for Securing Class IE Battery Chargers to the Building Structure Are Inappropriate to the Circumstance in the 8 3/8" fillet welds were required; it is impossible to achieve the required fillet weld size for four of these weld locations because material thickness is less than .200 inches; the 4 welds do not conform to required thickness for 3/8" fillet weld; welding was accepted by site QC even though welds could not be made in the manner required.)

I&E Report 80-13 -- Failure to Follow Welding Procedure

I&E Report 80-20 -- Unsuitable Weld Surface Condition as Required by Magnetic Particle Test Procedures

I&E Report 80-18 -- Failure to Report a Significant Construction Deficiency (Nearly 200 welds in safety-related piping systems reported as being undersized (and therefore presumably under-strength) were not reported to NRC)

I&E Report 80-17 -- Failure to Follow Drawing for Weld Prep Details (counterbore transition taper was $30^{o}$ and $33^{o}$ instead of maximum angle of $10^{o}$)

I&E Report 80-25, the last documented SALP which was conducted at Comanche Peak, covering the period August 1, 1979, through July 31, 1980, also has pertinent information regarding welding problems.

SEE last three paragraphs of page 6 of this pleading.

5.h. Since this was not our wording, we are not certain exactly where the wording "inspection and testing" came from. However, in the context of the contention as we view it, the inspection and testing pertains to all areas of the QA/QC program. Reference was made in this regard in the following:

The 5/7/79 Supplemental Petition and Contentions of Intervenors, ACORN, Mary and Clyde Bishop and Oda and William Wood, pages 16 and 17, items 35 and 36.

The Supplement to Petition for Leave to Intervene by Citizens for Fair Utility Regulation (CFUR), pages 4 through 9, items IV and IV.A.

The 5/7/79 Supplement to Petition for Leave to Intervene and Contentions by CASE (Citizens Association for Sound Energy), after going through the specific items already quoted therein, on page 54, item 7.

The preceding were quoted in CASE's 3/15/82 Answers to NRC Staff's Fourth Set of Interrogatories to CASE, C5-17.

In the almost three years since the preceding was written, there have been continuing problems with construction at CPSES and with the QA/QC at the plant. See last three paragraphs on page 6 of this pleading.

5.i. We are not certain, since this was not our wording, exactly where the specific wording "materials used" came from. However, there are specific instances where questions have been raised in I&E reports about the materials used. We have not at this time identified these reports in this context.

See last two paragraphs of page 6 of this pleading.

5.j. We believe that the wording "craft labor qualifications and working conditions (as they may affect QA/QC)" referenced in the contention came from:

The 5/7/79 Supplemental Petition and Contentions of Intervenors, ACORN, Mary and Clyde Bishop and Oda and William Wood, items 37 and 38.

The 5/7/79 CFUR's Supplement to Petition for Leave to Intervene by Citizens for Fair Utility Regulation (CFUR), page 42, paragraph 3; page 44, paragraph 2; and page 46, last paragraph continued on page 47 of CASE's 3/15/82 Answers to NRC Staff's Fourth Set.

The 5/7/79 Supplement to Petition for Leave to Intervene and Contentions by CASE (Citizens Association for Sound Energy), page 55, item 8, quoted in CASE's 3/15/82 Answers to NRC Staff's Fourth Set, 05-19.

See last three paragraphs of page 6 of this pleading.

5.k. We believe that the wording "working conditions as they may affect QA/QC" came basically from the same sources as referenced in our answer to 5.j. above.

See last three paragraphs of page 6 of this pleading.

6. We have not identified the specific bases on which CASE intends to rely in support of its position on Contention 5. They will probably include but not be limited to: I&E Reports, information regarding ASME's allowing the certification and stamps to expire at CPSES, answers to CASE's interrogatories and requests to produce to Applicants and perhaps to NRC Staff, possibly the audit reports recently received from Applicants, and possibly the document just received by CASE on 3/15/82 (which we have not yet had the opportunity to review) "Review of the Quality Assurance Program for the Design and Construction of the Comanche Peak Steam Electric Station," prepared by F. B. Lobbin, February 4, 1982. We are also in the process of trending the I&E Reports for CPSES and for CPSES as compared to STNP. We will supplement our answers as soon as new information is available.

7. Probably. Unknown at this time. We will supplement later.

8. Unknown at this time. See answer to 7. above.

9. Although CASE has not identified the specifics in 6. preceding, we have identified many concerns in 5. preceding. (This makes it a little difficult to know exactly how to answer your question.)

9.a. Possibly. Unknown at this time. We will supplement.

9.b. At this time, we anticipate that we will probably pursue all of the construction practices identified in Contention 5. We will supplement.

10. Yes. See answer to 6. preceding.

11. Unknown specifically at this time. However, see previous answers to interrogatories in this pleading for some of them. We will supplement.

12. Very probably. Unknown at this time. We will supplement.

13. Not applicable.

14. Not at this time. We will supplement if and when appropriate.

15. We are still analyzing this. We will supplement our answers.

16. Not applicable at this time. We will supplement.

17. Possibly. Unknown at this time. We will supplement.

18. See answer to 17 above.

19. Probably. See answer to 6. preceding. Specifics unknown at this time. We will supplement.

20. See answer to 19 above.

Respectfully submitted,

Juanita Ellis

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION



BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

| | | |
|---|---|---|
| In the Matter of | I | |
| | I | |
| APPLICATION OF TEXAS UTILITIES | I | Docket Nos. 50-445 |
| GENERATING COMPANY, ET AL. FOR AN | I | and 50-446 |
| OPERATING LICENSE FOR COMANCHE | I | |
| PEAK STEAM ELECTRIC STATION | I | |
| UNITS #1 AND #2 (CPSES) | I | |

## CERTIFICATE OF SERVICE

By my signature below, I hereby certify that true and correct copies of CASE's Answers to Applicants' Third Set of Interrogatories to CASE and Requests to Produce

have been sent to the names listed below this 16th day of March 1982, by Express Mail where indicated by * and First Class Mail elsewhere.

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