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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before Administrative Judges:

Peter B. Bloch, Chairman
Dr. Kenneth A. McCollom
Dr. Walter H. Jordan

DOCKETED
NRC

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Docket Nos. 50-445
50-446

In the Matter of

TEXAS UTILITIES ELECTRIC COMPANY, et al.

(Application for
Operating License)

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

June 29, 1984

MEMORANDUM AND ORDER
(Written-Filing Decisions, #1: Some AWS/ASME Issues)

This memorandum and order inaugurates a series of decisions intended to resolve, without further hearings, as many as possible of the design quality assurance and design issues remaining in this case.

The issues subject to this series of decisions are those discussed in LBP-83-81, 18 NRC 1410 (1983) and its successor (concerning a motion for reconsideration), LBP 84-10, 19 NRC ____ (February 8, 1984). The first such issue--and the one we take up now-- is "Applicants' [Texas Utilities Electric Company, et al.] Motion for Summary Disposition of Certain CASE¹ Allegations Regarding AWS² and ASME³ Code Provisions Related to Welding Issues; Request for Expedited Response", April 6, 1984.

1 Citizens Association for Sound Energy.

2 American Welding Society.

(Footnote Continued)

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I. Procedures

Motions for Summary Disposition arise under 10 C.F.R. §2.749(d). Generally speaking, a party seeking Summary Disposition files a "Statement of Material Facts as to Which There is No Genuine Issue" and supports that statement with a brief and with an accompanying affidavit. Parties opposing summary disposition must demonstrate, through briefs and affidavits, that there are genuine facts in issue. The opponents of summary disposition may not rely on generalities. Only genuine issues of fact are set for hearings.

This series of decisions on summary dispositions is doubly unusual. First, we are considering summary disposition subsequent to the issuance of a formal order concerning the issues in controversy. That order is binding in this litigation and provides the framework for consideration of the summary disposition motions.

Another unusual aspect of the procedure is that we have adopted--with the permission of the parties--a somewhat more lenient standard for granting summary disposition. Whenever we find ambiguities requiring further clarification, we will ask questions (in writing or on the record), request briefs or otherwise seek to clarify matters fairly. Having done that, we will schedule a hearing (or cross-examination of one or more witnesses) only if we determine that the hearing is

(Footnote Continued)

³ American Society of Mechanical Engineers.

necessary for us to make a reasoned decision; we have described this as "adopting a procedure . . . which favored the determination on written papers in the discretion of the Board . . ." . Tr. 13,798, 13,800-13,801, 13,803.

The purpose of this more lenient standard for summary disposition is to avoid unduly prolonged hearings of technical matters, which generally are better resolved based on an understanding of the facts rather than by use of a magical wand to discern truth telling. Our experience in these hearings is that technical issues require careful study and the comparison of the views of the experts called by the parties. This is an arduous task that is helped by cross-examination only when there is substantial lack of clarity in the written filings or there are important disagreements that require clarification and resolution through the oral interchange provided by a hearing. Cross-examination rarely succeeds in unmasking experts as charlatans and tends to waste time.

We are grateful to all the parties for their consent to the Board's suggestion that these procedures be adopted.

II. The Issues

As our previous decision sets forth, CASE filed Proposed Findings of Fact setting forth 10 aspects of the AWS Code that it believed to be applicable to welds made at Comanche Peak, even though the ASME Boiler and Pressure Vessel Code is the principal code of record. We found Applicants' answer, that the AWS Code does not apply to Comanche Peak, to be unacceptable.⁴ Our concern was analogous to the legal problem of whether federal legislation completely "fills the field" and prohibits complementary state action or whether a state may enact legislation to supplement the federal purpose. In this context, the concern was whether the ASME Code had "filled the field" with respect to welding or whether the AWS Code had some proper scope within that field as well.

In its present filing, Applicants have acknowledged that there is a proper role for the AWS in the field of weld design. The bottom line is that "neither code provides all the details necessary to design a weld joint, and both codes rely on the designer to assure that the weld joint is designed to meet the design and operating loads."⁵ As a consequence, Applicants will deal separately with ASME/AWS design issues in a separate written motion.

⁴ 18 NRC at 1436; LBP 84-10, 19 NRC ____ (February 8, 1984), slip op. at 27-29.

⁵ Affidavit of W.E. Baker, et al. (Applicants' Affidavit) at 3.

At this time, we address only whether welding procedures at Comanche Peak that are based entirely on the ASME Code are adequate to assure the fabrication of sound welds⁶--when used by qualified welders in the context of an appropriate QC (quality control) system. (For the purpose of deciding this motion, we do not consider it relevant to determine whether Applicants use qualified welders or have an appropriate QC system.) In addition we are concerned with the appropriateness of Applicants' procedures for weave welding, downhill welding, preheat requirements, and cap welding.⁷ This motion does not cover in any way whether the plant has been constructed according to the applicable procedures.

⁶ The five AWS/ASME issues before us, identified by numbers originally assigned by CASE, are: (1) "Preheat requirements for welds on plates over 3/4-inch thick," (2) "Drag angle and work angles (which limit the space allowed for the welder to function)," (3) "Beta factor for tube-to-tube welds," (7) "Lap joint requirements," and (9) "Limitation on weld sizes relative to plate thickness." Applicants' Motion at 8-9.

Applicants' Motion is ambiguous with respect to how they will handle the application of Korol and Mirza criteria to NPSI rear brackets (LBP 84-10, slip op. at 28), but that appears to be a design issue and is not covered here.

⁷ Applicants' Motion at 19 to 25. Note that Applicants' Request for an expedited response was denied but the Board removed the issue covered by the motion from the hearing calendar.

III. Discussion of CASE's Answer

We note with some dismay the irrelevance of substantial portions of CASE's brief and its answer to the Applicants' Statement of Material Facts. We infer that CASE's engineer-consultant did not grasp that we are dealing only with a piece of the record. The principal question being litigated is whether the ASME Code and its required qualification testing procedures fully cover the AWS provisions listed in footnote 6, above. If the ASME Code fully covers these provisions, there is nothing left to argue about.

Because CASE often has made cogent technical points in this proceeding we examined its filing with special care. However, we failed to find any instance in which CASE singled out an ASME provision, compared it with an AWS provision and showed why the ASME provision was not adequate to the purpose also addressed by AWS. We are confident that if CASE knew of such an instance it would have told us of it. Since it has not done so, though it had an opportunity, we have no basis for concluding that the ASME provisions covered by Applicants' motion require supplementation from the AWS Code.

As we went through CASE's filing, we found several recurring errors. The first recurring error we note is that CASE tends to omit any explanation of why its objections are relevant to the issues. For example, it does not argue why "design restrictions outlined in AWS" are relevant to this motion nor why the failure to implement preheat in the field is relevant to this motion. See CASE's Answer, May 14, 1984, at 1, 2, 6-7 for example.

CASE's second recurring error is that CASE sometimes fails to contradict Applicants' statement. For example, Applicants stated that "Both the AWS and ASME Codes include requirements for welding procedures that will result in welds that are adequate for their intended uses." Instead of contradicting this statement, CASE addresses an alleged implication. In this instance, CASE alleges that Applicants have implied that "ASME does not require consideration of the design restrictions outlined in AWS." However, in this fashion, CASE does not rebut the statement itself--only the alleged implication. Furthermore, since the genuine issues were designed to logically flow into one another, challenges to alleged implications simply miss the main flow of the argument and leave it undisturbed.

We urge that in future filings CASE address the logical underpinnings of the Applicants' argument, demonstrating important issues that affect the public safety. To do this properly, CASE should first attempt to understand each argument analytically and as a whole. Only in that way will it be able to determine the importance of individual sub-issues that build toward that whole.

We will not further address CASE's arguments that we have already addressed generically as being responsive to "implications" or as not being shown to be relevant to the pending motion. For example, many of CASE's comments seem relevant to design issues or to construction issues, neither of which were covered by this motion.

CASE's Answer⁸ takes issue with Applicants' statement of a genuine issue of fact concerning limited access welds. To the extent that CASE points out that limited access welds require special welder qualification,⁹ we accept CASE's correction of the applicants' statement. It is our understanding of the record that the safety of limited access welds depends in part on their being performed by qualified welders and in part on appropriate QC checks.

With respect to the Beta Factor for Tube-To-Tube Welds, the essence of Applicants' proposed finding is that the AWS Code uses the Beta factor as a criterion for requiring qualification testing for welds. Since all welds at Comanche Peak are qualified, the apparent dispute over what the Beta Factor requirement is has no significance. The ASME qualification procedures appear to satisfy the AWS requirement, based on Beta Factors, that certain welds need to be qualified by testing. To the extent that the Beta Factor controversy involves proper weld design, it is not related to the pending motion for summary disposition.

With respect to weave beading, CASE does not make any argument contradicting applicants' statement that its weave beading procedure is

⁸ "CASE's Answer to Applicants' Statement of Material Facts as to Which There is no Genuine Issue", May 14, 1984, at 9.

⁹ We adopt this CASE finding even though it is not accompanied by a transcript citation. In the future, CASE acts at its peril when it fails to give record citations, but it is our clear memory of the record that this fact is correct. Furthermore, the finding does not affect the outcome and Applicants are not prejudiced.

properly qualified. Nor has CASE pointed to any AWS Code provision that is not also reflected in ASME. Hence, applicants have established that its weave beading procedure is appropriate. The argument that the procedure is being improperly applied in the field is irrelevant to the pending motion.

With respect to downhill welding, the record reflects that the only permitted welding at Comanche Peak (with the exception of a qualified procedure for one contractor) is uphill welding. Hence, there is no showing that applicants are disregarding a relevant AWS requirement.

With respect to cap welding, the core "disagreement" is that Applicants state that there are no "unique restrictions in placing new weld material on an old weld," and CASE attempts to rebut this by stating that each pass of a multiple pass weld "must have the same heat input as provided . . . by Table 2.7." However, this does not join the issue. Applicants never contended that heat input requirements are inapplicable. Heat input is not a "unique" restriction on a multiple pass, it is uniformly applicable to all weld passes regardless of whether they are part of a "cap" weld made some time after the remainder of the weld is completed.

With respect to undersized welds, there is no reason to believe that the original weld material would be subject to an increased risk of cracks. Hence, they represent no special risk and there is no reason given by CASE to prohibit repair by laying on a new weld over the top.

With respect to underbead cracking, CASE does not indicate any AWS section to which applicants ought to comply but to which they do not comply.

In short, we find only one of CASE's comments to have merit and that one comment does not undermine the basis for Applicants' case.

IV. Staff Arguments and Board Findings

The filing with which we most nearly agree, and the one that most clearly sets forth the issues, is Staff's filing.

Staff's Response¹⁰ correctly states the principal issue: "whether welding procedures qualified by test in accordance with the ASME Code are adequate in light of the AWS requirements for prequalified welds." Because we find Staff's argument to be clear and persuasive, we accept the following findings suggested to us by Staff and Applicants:

1. The 1974 ASME Code requires that all welding procedures be qualified by testing in accordance with specified ASME Code requirements. CASE has failed to indicate any way in which those code requirements are inadequate or need to be supplemented by AWS requirements. Consequently, the ASME Code testing procedures provide an adequate assurance of safety.

¹⁰ NRC Staff Response to Applicants' Motion for Summary Disposition on AWS and ASME Code Provisions on Welding, May 11, 1984.

2. All of Applicant's ASME procedures are qualified by test pursuant to Section IX of the ASME Code.¹¹

3. Welds made in compliance with the ASME Code are sound. CASE has not demonstrated that there are any AWS procedures whose application is required because ASME-qualified welds are not acceptable.

4. The Staff of the Commission has compared the provisions of the ASME and AWS codes for each of the five AWS welding parameters for which summary disposition is sought.¹² The Staff has not found any AWS provisions that require implementation to assure the safety of welds along any of these parameters. Nor has CASE demonstrated that there are any such provisions of the AWS Code.

5. Applicants' procedures for weave welding, downhill welding, preheat and cap welding comply with the ASME Code.¹³ CASE has not indicated that there are any provisions of the AWS code that need to be applied with respect to these factors in order to assure adequate safety of the welding process. Staff has found that Applicants' procedures also comply with the AWS Code, and CASE has not persuaded us otherwise.

¹¹ We adopt this finding based on Applicants' Statement of Material Facts as to Which There is No Genuine Issue, ¶¶ 2 and 8. These statements were not controverted.

¹² Staff Response at 10-12.

¹³ Applicants' Affidavit (Affidavit of W.E. Baker, M.D. Muscente, J.D. Stevenson, and R.E. Lorentz, Jr. Regarding Allegations Involving AWS and ASME Code Provisions, April 2, 1984) at 17-21.

V. Conclusion

There is no genuine issue of fact related to the pending motion. Additionally, pursuant to the agreement of the parties we have examined the written filings and have reached a reasoned determination that Applicants' compliance with ASME Code has been adequate to assure the safety of its welding procedures with respect to the welding parameters in issue. CASE has failed to substantiate its concern that AWS code provisions must be used to supplement ASME procedures to produce safe welding practices along the parameters in question.

Accordingly, summary disposition should be granted.

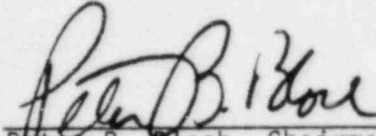
O R D E R

For all the foregoing reasons and based on consideration of the entire record in this matter, it is this 29th day of June 1984

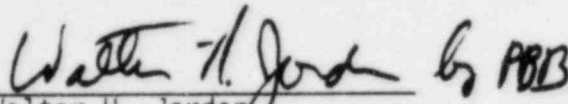
ORDERED:

That Applicants' Motion for Summary Disposition of Certain Case Allegations Regarding AWS and ASME Code Provisions Related to Welding Issues, April 6, 1984, is granted. Accordingly, the issues covered by the Motion are dismissed from the proceeding with prejudice.

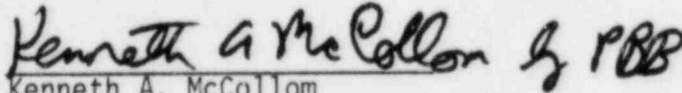
FOR THE
ATOMIC SAFETY AND LICENSING BOARD



Peter B. Bloch, Chairman
ADMINISTRATIVE JUDGE



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ADMINISTRATIVE JUDGE



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ADMINISTRATIVE JUDGE

Bethesda, Maryland