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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION '84 OCT -1 P12:12

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

TEXAS UTILITIES GENERATING  
COMPANY, et al.

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

DOCKETING SECTION

Docket Nos. 50-445-P L  
and 50-446-D L

CASE'S ANSWER TO APPLICANTS' RESPONSE TO  
BOARD'S PARTIAL INITIAL DECISION REGARDING A500 STEEL

BACKGROUND AND DISCUSSION

On October 6, 1983, the Licensing Board issued its PARTIAL INITIAL DECISION (Change in Material Properties for A500 Steel). In that Partial Initial Decision, the Board stated, in part:

"We conclude that applicant has failed to demonstrate compliance with General Design Criteria (GDC) 1 and 4 in the design of pipe supports using A500 Steel at Comanche Peak.

"The specific deficiency is that applicant has not demonstrated that welded supports using A500 Steel have been designed with adequate safety margins. In particular, applicant has relied on the 1974 version of the ASME Boiler and Pressure Vessel Code (ASME Code), which erroneously calculated the strength of A500 Steel without recognizing a reduction in strength that occurs when this type of cold-formed steel is welded. Although applicant is not bound by Code Case N-71-10, which reduced the strength of A500 Steel by 15 percent when it is welded, applicant has not adequately demonstrated that its analyses of yield values for A500 Steel used in pipe supports, pursuant to the ASME Code, have left an adequate margin of safety." (Pages 2 and 3, footnotes omitted.)

"It is altogether proper that construction of nuclear plants not be continuously subject to tougher and tougher standards as a result of code cases and revisions. This is the essence of the regulatory scheme.

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"However, this freedom from automatic 'ratcheting' does not excuse applicant from its basic obligation to build a safe plant pursuant to the general design criteria. To meet that basic obligation, applicant may disregard new knowledge about materials only by analyzing the effect of this new knowledge on its plant and showing that there are adequate safety margins remaining. It was never intended that an applicant rely entirely on code sections to assure safety. It certainly was never intended that applicant would rely on erroneous code sections to assure safety." (Pages 4 and 5.)

"ORDERED:

"1. That Texas Utilities Generating Company, et al. shall file analyses demonstrating that pipe supports manufactured with A500 Steel for the Comanche Peak Steam Electric Station, Units 1 and 2, have adequate safety margins. . . ." (Page 8.)

Over six months later, on April 11, 1984, Applicants filed their Response to Partial Initial Decision Regarding A500 Steel. The Board is treating Applicants' Response as a Motion for Summary Disposition. After much discussion and filing of unofficial and official requests for information and documents by CASE, the Board, during a 6/15/84 telephone conference call, ordered Applicants to provide responses to certain specific CASE requests. However, it was not until additional discussions and written pleadings that Applicants finally supplied CASE with most of the documents (which the Board ordered them to supply on 6/15/84) -- on 9/6/84 (received by CASE on 9/7/84). /1/. However, even then, the calculations were

/1/ See, for example, CASE's 5/10/84 letter to William A. Horin, counsel for Applicants, under subject: Discovery Requests -- A500 Steel; CASE's 5/17/84 Motion for Discovery Regarding Applicants' 4/11/84 Response to Partial Initial Decision Regarding A500 Steel; Applicants' 7/5/84 letter to CASE enclosing some documents on A500 Steel; 7/26/84 on-the-record telephone conference call among the Board and parties; Applicants' 8/4/84 letter to CASE; CASE's 8/13/84 Motion for Additional Time In Which to Respond to Applicants' Motions for Summary Disposition on Design/Design QA Issues, especially pages 6 and 7; CASE's 8/13/84 letter to William A. Horin, counsel for Applicants, under subject of: Open Discovery Items for Motions for Summary Disposition; and Applicants' 9/6/84 letter to CASE (received by CASE on 9/7/84) attaching the remainder of Applicants' responses to CASE's requests for documents on A500 Steel.

incomplete (see attached CASE's Answer to Applicants' Response to Board's Partial Initial Decision Regarding A500 Steel in the form of Affidavit of CASE Witness Mark Walsh, hereinafter Walsh Affidavit, at page 13).

One reason for Applicants' slowness in responding to CASE's requests for information and documents is now clear -- the documentation sought does not exist; and, in fact, many of the calculations were prepared in July 1984 especially in response to CASE's requests (see Walsh Affidavit, pages 11 through 13, and Attachments B and C hereto). This clearly demonstrates an obvious breakdown in documentation retention and retrievability. It is also contrary to 10 CFR Part 50, Appendix B, Criteria II, III, V, VI, XV, XVI, XVII, to name a few.

With regard to another point made by Applicants (and discussed in the NRC Staff's Response to Applicants' Response to Partial Initial Decision Regarding A500 Steel at pages 3-7), although CASE agrees with Applicants that GDC 1 and 4 and 10 CFR 50.55a do not specify exactly how Applicants account for the revised yield strengths of the A500 tube steel, it is clear that they must supply sufficient and adequate documented information to the Board to assure the Board both that Applicants adequately considered it initially and that they have adequately considered it now. The Response filed by Applicants (as has been the case so often in these proceedings) did not attach documentation to support their assertions (other than a copy of the letter from ASME); Applicants are again saying to the Board, in effect, "Trust me." It has been left up to CASE (again as has been the case so often in these proceedings) to supply the Board with documentation which should have been supplied by the Applicants to begin with. As demonstrated

later herein by the Affidavit of CASE Witness Mark Walsh and by documentation, Applicants have totally failed to prove that they initially adequately considered the revised yield strengths of the A500 tube steel, and they have also failed to meet their burden of proof that they have even now adequately considered the revised yield strengths.

There are also some points discussed in the Staff's Response which should be mentioned. The Staff counsel argues that "this requirement for appropriate consideration may be satisfied in any number of ways, including engineering judgement based on previous experience with the effect of material property changes on design analyses, scoping calculations, or assessment of design practices that result in conservative calculation of stresses" (top of page 6). It should be noted that Applicants have not demonstrated any previous experience with the effect of material property changes on design analyses, their calculations have been inadequate, and their assessment of design practices that allegedly result in conservative calculation of stresses is in error; therefore, there is no basis for such engineering judgement. (In addition, Applicants' track record in these proceedings regarding the use of "engineering judgement" has not been one to inspire confidence.) Further, the random sample which the Applicants have provided does not demonstrate a worst-case basis.

Also, for the reasons discussed herein, CASE does not agree with the Staff's statement (bottom of page 6) that "Applicants have now submitted evidence showing that they did give appropriate consideration to the possible effect of Code Case N-71-10's reduction in A500 steel yield

strength values." (See page 13 of Walsh Affidavit.) Further, even the Staff states (pages 6 and 7) that:

" . . . the Staff believes that Applicants have not yet completely demonstrated in the computational assessments described in Mr. Finneran's affidavit that their original judgement on the impact of Code Case N-71-10 was, in fact, correct . . . "

. . . although they go on to state that Applicants have indicated how this may be done.

It should also be noted that, for the reasons discussed herein (see pages 12 and 13 of Walsh Affidavit), CASE does not agree with the Staff's evaluation in Section C (pages 9 through 11) and in their conclusion (pages 11 and 12) that:

" . . . if Applicants demonstrate that they correctly compared level B stresses against the reduced level B allowable where the level B stress, rather than the level C stress, is the limiting stress, there will be sufficient evidentiary basis for this Board to conclude that Applicants considered the possible effect of ASME Code Case N-71-10 on the adequacy of pipe support designs utilizing A500 steel, and that their conclusion that there was no adverse safety impact was correct."

As stated previously in this pleading, one reason for Applicants' slowness in responding to CASE's requests for information and documents is now clear -- the documentation sought does not exist; and, in fact, many of the calculations were prepared in July 1984 especially in response to CASE's requests (see Affidavit of Mark Walsh, pages 11 through 13, and Attachments B and C, herein). This raises another very interesting question which should be considered. In the Affidavit of W. Paul Chen on Revised A500 Steel Yield Values (which was attached to the NRC Staff's Response to Applicants' Response to Partial Initial Decision Regarding A500 Steel), Dr. Chen states (pages 3 and 4):

"I have reviewed 19 of the design packages for these 182 supports.

"I reviewed the design packages to identify the stresses calculated by Applicants for each of these 19 supports . . . "

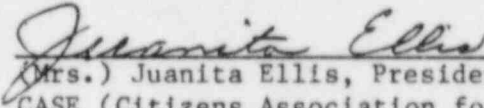
What did Dr. Chen review? CASE asked for calculations and drawings according to the following criteria: large bore; large loads (both in magnitude and % of allowable; with Richmond inserts where there are two or more spans; and members that are in bending (see CASE's 8/13/84 letter to Applicants' counsel, Mr. Horin, under subject of Open Discovery Items for Motions for Summary Disposition, top of page 2 of Attachment, item 9). Dr. Chen could not have reviewed the calculations which were provided to CASE for many of the 20 which Applicants provided to CASE as having met CASE's criteria (plus 3 additional supports), because those calculations were not performed until July 1984 (see Attachments B and C hereto).

The remainder of CASE's Answer is contained in the attached, which is in the form of an Affidavit by CASE Witness Mark Walsh.

In conclusion, for the reasons discussed herein, and as clearly demonstrated by Applicants themselves, Applicants have not supplied sufficient and adequate documented information to the Board for the Board to be assured both that Applicants adequately considered the revised yield strengths of the A500 tube steel initially, or that they have adequately considered it now. As demonstrated later herein, Applicants have failed

totally with regard to the former (and in fact the evidence clearly indicates the contrary) and they have failed to meet their burden of proof as to the latter. In addition, there has, at a minimum, been an obvious and documented breakdown in documentation retention and retrievability. Further, Applicants are in violation of 10 CFR Part 50, Appendix B, Criteria II, III, V, VI, XV, XVI, XVII, to name a few. The Board should so find.

Respectfully submitted,

  
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(Mrs.) Juanita Ellis, President  
CASE (Citizens Association for Sound  
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