

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

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

AFFIDAVIT OF JACK DOYLE

1 Q: Mr. Doyle, is there additional information which you believe is necessary  
2 to complete the record in these proceedings in regard to the steam generator  
3 upper lateral restraint?

4 A: Yes.

5 Q: Why do you believe it is necessary to reopen the record in regard to  
6 this matter?

7 A: From the information we had previously, we didn't know about this  
8 potential problem. We were looking at thermal expansion and now we're concerned  
9 with thermal contraction. We were working in one direction on a potential problem,  
10 and now it appears that the potential problem is actually in the opposite direction.

11 The steam generator is now locked in place in the hot position relative  
12 particularly to its own radial expansion and its interdependence on the recir-  
13 culating pump. From the information we have, the recirculating pump is locked  
14 in place relative to the steam generator. When they shut the generator down,  
15 it returns to 120° in about six hours or so (we don't have the exact information  
16 on this). The temperature differential would be about 500°, so the relative

1 dimension between the centers of the steam generator and the recirculating  
2 pump will decrease by some discrete dimension which we currently don't know.  
3 (It would probably be 3/4" to 1".)

4 With that upper lateral restraint as a rigid support, it will cause  
5 moment at the cross-over leg. So there could be a problem both with the cross-over  
6 leg and with the upper lateral restraint due to constraint of contraction.

7 Q: What specific information would you require to be able to make an analysis  
8 of this potential problem?

9 A: The support struts of the steam recirculating pump between the cross-  
10 over and the cold leg. There are three struts at 120° and there are also three  
11 vertical columns. And on the steam generator, there are four vertical columns,  
12 double-pin ended on all four columns. We need the drawings for all of those.  
13 And we also need the center-to-center dimensions of the steam generator and  
14 the recirculating pump.  
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I have read the foregoing two-page affidavit, which was prepared under my personal direction, and the thoughts and words expressed therein are my own thoughts and words. It is true and correct to the best of my knowledge and belief. Where questions were posed, they were posed by CASE.

Jack Doyle  
Jack Doyle

DATE: June 8 1983

COUNTY OF Worcester

STATE OF MASSACHUSETTS

On this, the 8th day of June, 1983, personally appeared Jack Doyle, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes therein expressed.

Subscribed and sworn before me on the 8th day of June, 1983.

Jane O. Canaker

Notary Public in and for the  
County of Worcester

, Massachusetts

My Commission Expires: My Commission Expires July 15, 1988