

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
TEXAS UTILITIES ELECTRIC	)	Docket Nos. 50-445 and
COMPANY, ET AL.	)	50-446
	)	
(Comanche Peak Steam Electric	)	(Application for
Station, Units 1 and 2)	)	Operating Licenses)
	)	

AFFIDAVIT OF RICHARD E. CAMP REGARDING BOARD  
INQUIRY CONCERNING HOT FUNCTIONAL TEST RESULTS

I, Richard E. Camp, being first duly sworn hereby depose and state, as follows:

I am employed by Impell Corporation under contract to Texas Utilities Generating Company as Manager, CPSES Startup. In this position my responsibilities include oversight of the conduct of preoperational testing, which includes hot functional testing. The purpose of this affidavit is to address certain questions posed by the Atomic Safety and Licensing Board in its November 9, 1984, Memorandum (Official Notice Concerning Pipe Supports).

In its Memorandum the Board quoted portions of a transcript of an October 23, 1984, meeting between Applicants and the NRC Staff Technical Review Team. Those portions of the transcript involve my discussion of activities to be completed during the next plant heat up. Specifically, the Board quoted, as follows:

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Included in that next [hot functional testing] heat up will be the thermal expansion test of the deficiencies found the last time. The current status is that we [are] . . . in preparation for ambient measurements for the deficient supports found during hot functional testing.

\* \* \*

At the current time, we plan on finishing these incomplete preoperational tests prior to fuel load, in which case they will be reviewed and approved prior to fuel load. Any kind of technical specification deviations that may be associated with thermal expansion, we don't know the scope or extent of those at this time, and we won't know until we finish the re-tests associated with thermal expansion.

The Board indicated in a recent conference call that its concern focusses on the language "the deficient supports found during hot functional testing" and "re-tests associated with thermal expansion" (Tr. 19,431-32). The Board believes these statements appear to be relevant to pipe support design and invited the parties "to correct these portions of the transcript" if they wished. (Memorandum at 1.)

There is no need to correct either portion of the transcript cited by the Board. The term "deficient support" refers to supports for which a test deficiency exists. It was not used to refer to supports which were incorrectly designed.

Further, because it is extremely difficult to predict the exact thermal movement of the piping system one of the purposes of the HFT is to measure the actual movement of piping, compare it to the predicted movement and reconcile the differences that

are outside the acceptance criteria. These differences are documented on TDR's as deficiencies. Accordingly, during the first hot functional test (HFT), pipe supports (constant and variable spring supports as well as snubbers) which had not been installed or did not meet the acceptance criteria for expected thermal movement as specified in the thermal expansion test procedure, were identified for retest. There is no need to correct my statements regarding thermal expansion retests.

In order to illustrate the nature of test deficiencies for the Board I provide the following information. Documentation of deficiencies on Test Deficiency Reports assures that the supports will be retested. Test Deficiency Reports contain the problem description, corrective action and retest requirements. The reports are used by the Startup organization to report deficiencies in system or component operating characteristics, test documentation or startup procedure compliance. Examples of the deficiencies concerning pipe supports documented in these reports are, as follows:

- 1) If the design requirements of a support (for example, a spring setting) are revised by engineering after the first HFT due to as-built piping analysis,<sup>1</sup> each such support is documented on a Test Deficiency Report to assure subsequent retesting.
- 2) If during the test the piping did not move exactly as predicted by the analysis such that spring or snubber settings are outside the acceptable ranges or there is binding in the support components, the affected supports are listed on Test Deficiency Reports.

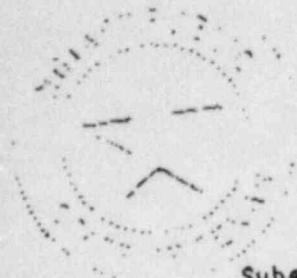
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<sup>1</sup> The HFT was conducted prior to completion of all as-built piping analysis work.

- 3) If it is decided during review of the test data that the data may be suspect, inaccurate, or insufficient, the affected supports are listed on a Test Deficiency Report. For example, the reading for a spring during initial ambient was too far from the reading during final ambient.
- 4) Hardware problems (e.g., malfunction of a snubber or spring) are documented on Test Deficiency Reports.
- 5) A snubber may have been temporarily removed to allow construction access. The test results with respect to such supports would, therefore, be indeterminate. These supports would be listed on Test Deficiency Reports.

In summary, my quoted statements during the October 23, 1984, meeting are accurate. There is no need to correct the cited portions of the transcript. The "deficient supports" I referred to involve supports which exhibited conditions requiring documentation as test deficiencies. These "deficiencies" are not, however, intended to refer to supports which were inadequately designed. In fact, the type of conditions which were observed during hot functional testing are the type expected and routinely encountered in such testing and one of the principal purposes of the testing is to identify and correct those anticipated "deficiencies".





Richard E. Camp  
Richard E. Camp

Subscribed and sworn to before me this 3<sup>rd</sup> day of December, 1984.

Walter D. Grumbine  
Notary Public

This is a telecopy facsimile. The original will be sent under separate cover.

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CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicants' Response to Board Memorandum (Official Notice Concerning Pipe Supports)", in the above-captioned matter was served upon the following persons by express delivery (\*), or deposit in the United States mail, first class, postage prepaid, this 3rd day of December, 1984, or by hand delivery (\*\*) on the 4th day of December, 1984.

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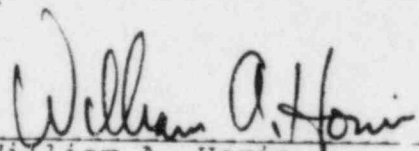
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