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NSIC

May 15, 1979
Fort St. Vrain
Unit No. 1
P-79104

Mr. Karl V. Seyfrid
Director, Nuclear Regulatory Commission
Region IV
611 Ryan Drive, Suite 1000
Arlington, Texas 76017

Docket #50-267

Subject: IE Bulletin 79-07 Seismic Stress
Analysis of Safety-Related Piping

Gentlemen:

The following is in response to the various items called out in IE Bulletin 79-07, dated April 14, 1979:

Item 1 -- Determine method of algebraic summation of component responses due to seismic event.

None of the summation methods listed for Item 1 in the bulletin were used in our computer design programs for the design of Class I piping systems. The programs used extensively for design work were Dynapipe and Dynaflex. Both of these programs use the square root of the sum of the squares (SRSS) method to combine force components. Therefore, Item 1 in IE Bulletin 79-07 does not apply.

Item 2 -- Provide computer listings for the portions of the codes or programs which used the direct algebraic method described in Item 1.

This does not apply since we used the SRSS method.

Item 3 -- Verify that piping computer programs were checked against benchmark problems.

The Dynapipe program was checked out on a hot reheat piping system and the results were checked against Dynal, a McDonnell-Douglas Automation Company program. Dynapipe was further checked out against MEL-21, a Los Alamos Scientific Laboratory program using various sample problems. In all cases the results were in close agreement. Additional references can be supplied upon request to further validate the Dynapipe program.

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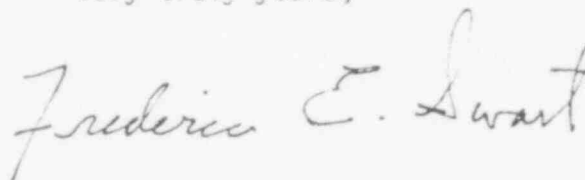
The Dynaflex program was checked out on a sample problem and compared against other computer piping programs, namely PIPEsD and ADLPIPE. The sample problems were called D1P1 and D1A2 and involved complex three-dimensional runs of pipe. In all cases the results from Dynaflex checked out to within a few percent of the results of these other programs.

Item 4 -- If any of the algebraic methods listed in Item 1 were used, submit a plan of action to correct them.

This item does not apply since we used a SRSS method of combining model response components, as opposed to adding them algebraically.

Therefore, we feel that Fort St. Vrain is not affected by any of the problems noted in IE Bulletins 79-06 and 79-07 concerning computer piping design criteria. Should you have any questions regarding this letter, please contact me.

Very truly yours,

A handwritten signature in cursive script that reads "Frederic E. Swart". The signature is written in dark ink and is positioned above the typed name.

Frederic E. Swart
Nuclear Project Manager

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