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MIDLAND PROJECT

HIGH ENERGY LINE BREAK LOCATION FREEZE

FILE B3.6, 050.803 UFI 42*10*02, 70*10*03 SERIAL: 11810

REFERENCE: S A VARGA'S SEPTEMBER 24, 1976 LETTER TO S H HOWELL

The criteria used to select postulated break locations for high energy line break analysis have been discussed and agreed upon (reference) and are presented in Section 3.6.2 of the FSAR. Generally, breaks in high energy piping are postulated at terminal ends and at intermediate points where either the calculated stress or the cumulative usage factor (for Class I piping) exceed predetermined threshold values. When the calculated stress everywhere between terminal ends of a piping run is less than the threshold value, a minimum of two intermediate break locations are postulated at the points of highest stress. FSAR Section 3.6.2 includes Figures (isometric drawings) showing the locations of the postulated breaks and Tables listing the calculated stress, type of break and blowdown thrust.

Since this information was published in the FSAR numerous instances have occurred where changes (such as pipeline routing, support or operating conditions) due to design evolution have necessitated review and revision of the stress analysis. Often the changes are minor, but a frequent result of recalculating the stress is that the points of highest stress are different than those from the preceding analyses.

It had been our intention to revise the locations of postulated breaks so that they would always be based on the latest piping analysis of record. But relocation of postulated breaks to the points of highest stress following reanalysis of a piping run is proving to be undesirable, particularly so in cases where pipe whip restraints and jet impingement barriers have already been designed, and in some cases installed. Therefore, we are changing our procedure for break location selection and adopting a practice which is being applied at some other plants under construction. This proposed approach avoids the unnecessary rework that results from relocation of postulated intermediate breaks during the late stages of design.

Henceforth, once a high energy piping run has been analyzed and break locations have been identified and evaluated, the postulated intermediate

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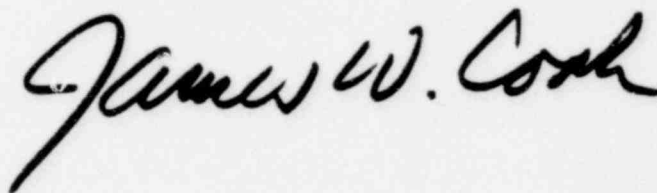
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break location will not be changed upon subsequent reanalysis except where either of the following two conditions exist. If significant changes occur in routing of the piping in the vicinity of the original intermediate break or if the reanalysis results in stresses or usage factors higher than the threshold values defined in FSAR Section 3.6.2, breaks will be repostulated and mitigative devices added where necessary.

Since this change effects only intermediate breaks which were postulated to ensure that a minimum number of breaks are assumed in a given pipeline and since all of these postulated intermediate break locations have calculated stress less than the threshold value, any impact on overall plant safety appears to be negligible.

We plan to incorporate the above into the Midland FSAR in the revision scheduled for submittal in June, 1981.

A handwritten signature in black ink, reading "James W. Cook". The signature is written in a cursive, flowing style with a large, prominent "J" and "C".

JWC/WJC/re

CC HWDakin
DTPerry
DBMiller (3)
RJCook, Resident Inspector