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DATE: February 22, 1978

TO: Tom Cox - NRC

FROM: A.G. Hosler - WPPSS

POSTULATION OF BREAKS IN THE RCS
UPPER HOT LEG LOOP USING 2.4 S_m AND
EQUATIONS (10), (12) AND (13) OF MEB 3-1

In the WNP-1/4 PSAR we commit to Regulatory Guide 1.46 which specifies the allowable stress range for ferritic steel as 2.0 S_m. MEB 3-1 specifies an allowable stress range of 2.4 S_m for all materials (B1.b (1) (a)).

Further, for postulation of breaks, MEB 3-1 allows calculated equation (10) stresses to exceed 2.4 S_m, provided, they are less than 3.0 S_m and if the CUF is less than 0.1. If greater than 3.0 S_m, stresses calculated by equations (12) and (13) taken individually should be less than 2.4 S_m and CUF should be less than 0.1. If not, breaks shall be postulated. (B.1.b (1) (b)).

No such references to equation numbers and corresponding stress range allowables are made in Regulatory Guide 1.46. Also, MEB 3-1 invokes these rules specifically for Class 1 piping between containment isolation valves.

We understand, however, that the NRC will allow application of the above to RCS piping. If this is true, we need not postulate split breaks in the upper hot leg of the RCS (candy cane); the hot leg loop restraints provided to restrain out-of-plate movement due to the split breaks may be eliminated

To eliminate these RCS restraints for WNP-1 we need NRC concurrence that th pipe break rules of MEB 3-1 may be used for primary coolant piping; specifi cally the use of the 2.4 S_m stress limit on ferritic and the use of equations (10), (12) and (13). Rules regarding number of break locations a types of breaks will follow those listed in MEB 3-1 for Class 2 and 3 pipin

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