



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 29 1978

MEMORANDUM FOR: R. Mattson, Director, Division of System Safety

FROM: Victor Stello, Jr., Director, Division of Operating Reactors

SUBJECT: OPERATING REACTORS EXPERIENCE MEMORANDA NO. 23, UPDATE
PIPE CRACKS IN LARGE DIAMETER BWR PIPING SYSTEMS

By memorandum dated March 31, 1978, we advised you of a potentially significant incident of safe end cracking and pipe cracking in a foreign operating reactor. We met with representatives from the foreign country on August 22, 1978 and reviewed the results of the pipe crack investigations. We also received copies of four classified reports (confidential) which address this problem. We have concluded, based upon this recent information, that the occurrence of large diameter piping cracks is noteworthy. Further details are as follows:

1. The affected Unit is a dual cycle BWR. The piping involved is nominal 25" O.D. stainless steel similar to type 304.
2. Cracking has been observed in the heat affected zone in the piping and cracking has been found at various locations in the safe ends.
3. All cracks originated from the ID and were comparatively shallow (< 5 mm depth in pipe and <10 mm depth in safe ends). Some cracks were extensive in length (600 mm in safe ends and 480 mm in pipe).
4. The cracks were found by visual examination of the inside surfaces after removal of the safe ends with a small piece of attached piping.

We are continuing to review this information to assess its significance with respect to US operating plants. We will provide copies of the translated documents as soon as they are available.

Victor Stello, Jr., Director
Division of Operating Reactors

cc: attached sheet

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AUG 29 1978

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