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710-390-0739

YANKEE ATOMIC ELECTRIC COMPANY



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WVY 80-84
WVY 80-85

May 29, 1980

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United States Nuclear Regulatory Commission
 Washington, D.C. 20555
 Attention: Mr. Victor Stello, Director
 Office of Inspection and Enforcement
 Reference: (a) License No. DPR-3 (Docket No. 50-29)
 (b) License No. DPR-28 (Docket No. 50-271)
 (c) License No. DPR-36 (Docket No. 50-309)
 (d) USNRC - IE Bulletin 79-03, dated March 12, 1979
 (e) USNRC - IE Bulletin 79-03A, dated April 4, 1980
 (f) USNRC - IE Information Notice 80-15, dated April 21, 1980
 Subject: IE Bulletins 79-03 and 79-03A

Dear Sir:

We are in the process of addressing your Bulletin, reference (e), which, although not significantly affecting our plants, has required a diversion of engineering resources from identified safety issues. This letter does not constitute our response to Reference (e), which is forthcoming, but rather is intended to direct your attention to some points we feel are of significance regarding piping defects. References (d) and (e) went to great lengths to describe the detection of centerline lack of weld penetration (CLP) which occurred during the fabrication of longitudinally welded pipe; however, we believe your concerns fail to adequately balance these findings against the conservatism built into the applicable design code or past operating experience.

It is known that CLP or other defects in the seam weld of rolled and welded pipe can effect the capability of that pipe to withstand pressure (or "hoop") stresses. However, this has always been recognized by the piping design codes, which require a weld efficiency factor to be used when calculating the minimum required wall thickness in pressure calculations. Other design loads would induce bending stresses which are not affected by CLP or other defects in longitudinal seam welds.

Any judgment of piping defects should take into consideration the implicit conservatisms in the codes used to design and fabricate the pipe in question. It should be recognized that while both ASME Section III and ANSI B31.1 require volumetric examination of longitudinal welded pipe prior to use

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in systems designed to 100% of allowable stress, ANSI B31.1 permits systems designed to 85% of allowable stress without volumetric examination of longitudinal welds. Each of the plants identified in References (a), (b), and (c) have been designed under the latter provisions of ANSI B31.1.

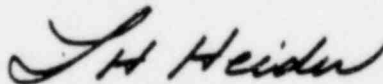
The discovery of CLP in longitudinal welds has not been related to any known piping failures, and we would greatly appreciate any information you might have regarding events of longitudinal weld failures under operating conditions. If CLP were a "significant deficiency" one would expect to see a significant number of piping systems fail during the hydrotest, which requires pressures of 125 or 150 percent of design pressure; however, your staff has not provided documentation of such failures.

In the unlikely event a failure should occur there is considerable experience from both fossil and nuclear power plants, in addition to studies by the NRC and various NSSS, which has reasonably established that a defective pipe weld would slowly develop into a through-wall crack, which would in turn propagate at a slow enough rate to permit detection by leakage prior to a complete pipe rupture or break.

In conclusion, we believe the issues identified in your letter, Reference (d), are not generic problems of "... a significant deficiency which requires extensive evaluation ...", but are rather minor design deficiencies. We do not believe this issue warrants the level of licensee attention or degree of concern so dramatically expressed above. In the absence of any evidence of longitudinal pipe weld failures, we suggest that a more effective approach would have been to issue an IE Information Notice informing all licensees of the detection of weld defects, as your staff had done in Reference (f). This action would enable each licensee to assess your findings and document a position which could easily be examined by your I&E resident or site inspectors, without prematurely diverting engineering resources currently involved in resolving safety issues.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY



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RHG/kaf

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