

Washington Public Power Supply System

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Docket No. 50-508

March 2, 1983
G03-83-186

U. S. Nuclear Regulatory Commission, Region V
Office of Inspection and Enforcement
1450 Maria Lane, Suite 260
Walnut Creek, California 94596-5368

Attention: Mr. D. M. Sternberg, Chief
Reactor Projects Branch No. 1

Subject: POTENTIAL 10CFR50.55(e) DEFICIENCY
SAFETY INJECTION TANKS
SAFE-END INDICATIONS (D/N #23)

- References: 1) Letter, G03-82-564, Mr. R. S. Leddick to Mr. T. W. Bishop,
PT Indications-Safety Injection Tanks and Reactor Pump
Supports (D/N #23), dated June 4, 1982.
- 2) NRC Letter, Mr. T. W. Bishop to Mr. R. S. Leddick,
Potential 10CFR50.55(e) Deficiency-RT Indications,
Safety Injection Tanks and Reactor Pump Supports,
dated June 22, 1982.

The final report for questionable indications on radiographic film for WNP-3 Safety Injection Tanks, Reactor Coolant Pump Volutes and Reactor Coolant Pump Motor Supports was forwarded to your office by Reference 1). The report noted that, with the exception of the linear indications in the Safety Injection Tank safe-ends, the identified deficiencies were not reportable per 10CFR50.55(e). Reportability of the safe-end indications would be evaluated and addressed by Combustion Engineering (CE).


Upon NRC review of the final report, it was determined by your staff (see Reference 2) that reportability of the safe-end indications should be addressed by the Supply System. Accordingly, an evaluation of the safety implications has been completed. Attached is the Supply System approved final report for the subject deficiency. It has been concluded that the safe-end indications are reportable in accordance with the criteria of 10CFR50.55(e).

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Should you have any questions or desire further information, please contact me directly.

A handwritten signature in cursive script, appearing to read "R. S. Leddick".

R. S. Leddick (760)
Program Director, WNP-3

DRC:nj

Attachments

cc: J. Adams - NESCO
D. Smithpeter - BFA
A. Tuzes - CE, Windsor
Ebasco - New York
WNP-3 Files - Richland

WASHINGTON NUCLEAR PROJECT NO. 3
10CFR50.55(e) DEFICIENCY

SAFETY INJECTION TANKS
SAFE-END INDICATIONS (D/N #23)

Description of the Deficiency

Linear defects were detected in radiographs, taken after Post Weld Heat Treatment (PWHT), of safe-end-to-nozzle-welds for Safety Injection Tank Nos. 3 and 4. These indications did not appear in the radiographs taken prior to PWHT. As a result, it was concluded that the linear defects may have resulted from or propagated during PWHT.

During repair, extensive grinding was required to remove the defects. The grinding encompassed most of the weld circumference with a depth generally exceeding one inch and a width of approximately one inch.

Analysis of Safety Implications

The linear defects in the safe-end-to-nozzle-welds, if left uncorrected, could adversely affect the safety of operations of the plant. Consequently, the deficiency is reportable in accordance with the criteria of 10CFR50.55(e).

The above conclusion is based on postulating loss of tank function as a result of partial or complete pipe severance at the welded joint. This loss of tank function would violate the assumptions utilized in analyzing large break LOCAs. Specifically, Section 6.3.3.2.2 of the CESSAR-F states:

Four safety injection tanks (SITs) are piped so that each SIT feeds a single cold leg injection point. Thus:

- a. For a break in the pump discharge leg, the safety injection flow credited is 100% flow from three SITs since it is assumed that all injection in the cold leg is spilled.
- b. For breaks in other locations, the safety injection flow credited is 100% flow from four SITs.

Corrective Action Taken

All linear indications, found in the safe-end-to-nozzle-welds of Safety Injection Tank Nos. 3 and 4, were removed and rewelded in accordance with the ASME Section XI plan submitted by CE and approved by the Supply System. Removal of the indications was verified by PT and the final radiographs of the repair weld have been reviewed and accepted by the Supply System.