



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
311 RYAN PLAZA DRIVE, SUITE 1000  
ARLINGTON, TEXAS 76011

MAR 04 1981

MEMORANDUM FOR: Those Listed Below  
FROM: G. L. Madsen, Chief, Reactor Projects Branch, RIV  
SUBJECT: IE INFORMATION NOTICE NO. 81-04

Subject IE Information Notice has been sent to the following licensees. A copy is attached for your information.

Arkansas Power & Light Company  
ANO-1 & 2 (50-313, 50-368)

Nebraska Public Power District  
Cooper Nuclear Station (50-298)

Omaha Public Power District  
Ft. Calhoun Nuclear Station (50-285)

Public Service Company of Colorado  
Fort St. Vrain (50-267)

*G. L. Madsen*  
G. L. Madsen, Chief  
Reactor Projects Branch

Attachment:  
As stated

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
WASHINGTON, D.C. 20555

IE Information Notice No. 81-04  
February 27, 1981  
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CRACKING IN MAIN STEAM LINES

Description of Circumstances:

The Virginia Electric Power Company promptly notified the NRC on February 23, 1981 that a radiography examination, during the ongoing steam generator replacement outage at Surry Unit 1, had revealed a lengthy crack indication in the I.D. counterbore area of a weldment on the in-line "T" fitting which connects the vertical run of 30-inch piping to the safety relief valve header and 30-inch main steam line of Steam Generator "A." This piping connection is located outside the containment penetration immediately upstream of the main steam isolation valve as shown in the attached sketch.

A visual and dye penetrant examination on the pipe I.D. surface of the weldment nearest the containment penetration established that the cracking extended about 120° around the fitting counterbore between the 4 o'clock to 8 o'clock position. Cracking was also observed in the weld counterbore at the opposite end of the T-fitting during visual examination of the piping interior. Radiographic examination of "B" and "C" main steam line T-fitting welds disclosed crack indications at similar locations.

Metallurgical specimens of the cracking were trepanned from the T-fitting of the "A" main steam line for analysis. Controlled excavation and depth measurements of the crack at its mid-length indicated a crack depth of about 0.090" in this location. The cause of cracking has not yet been established.

VEPCO has planned an ultrasonic examination of similar weldments in Surry Unit 2 main steam lines utilizing "Hot Piping" ultrasonic techniques. Preparations are also being made to ultrasonic examine similar weldments at North Anna Unit 1, currently in cold shutdown for refueling.

Recommendation to Licensees:

This information is provided as an early notification of a significant safety NRC staff. It is expected that or possible applicability to their main steam line configurations which repair outage, it is recommended examination of the three welds and performed before resumption of or assurance of piping integrity

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