



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

TERA

February 27, 1981

Gentlemen:

This Information Notice No. 81-04 is provided as an early notification of a possibly significant matter and it is expected that recipients will review the information for possible applicability to their facilities. No response is requested at this time. If further NRC evaluations so indicate, an IE Circular or Bulletin will be issued to further recommend or request specific licensee actions. If you have questions regarding this matter, please contact this office.

Sincerely,

James G. Keppler
James G. Keppler
Director

Enclosure: IE Information
Notice No. 81-04

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8103160 706

Docket No. 50-282
Docket No. 50-306

Northern States Power Company
ATTN: Mr. Dennis E. Gilberts
Vice President
Power Production and System
Operation
414 Nicollet Mall
Minneapolis, MN 55401

cc w/encl:
F. P. Tierney, Jr., Plant
Manager
✓ Central Files
AD/Licensing
AD/Operating Reactors
AEOD
Resident Inspector, RIII
PDR
Local PDR
NSIC
TIC
John W. Ferman, Ph.D.,
Nuclear Engineer, MPCA



SSINS No.: 6835
Accession No.:
8011040265
IN 81-04

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

February 27, 1981

IE Information Notice No. 81-04: 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 matter that is still under review by the NRC staff. It is expected that recipients will review the information for possible applicability to their plants. For those plants having similar main steam line configurations which are currently in a refueling or extended repair outage, it is recommended that a ultrasonic and/or radiographic examination of the three welds and counterbore areas of the T-fittings be performed before resumption of operations, unless some current basis for assurance of piping integrity is available.

No response to this notice is requested at this time. If you have any questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

Attachments:

1. Sketch
2. Recently issued IE Information
Notices

RECENTLY ISSUED
IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
81-03	Checklist for Licensees Making Notifications of Significant Events in Accordance with 10 CFR 50.72	2/12/81	All power reactor facilities with an OL
81-02	Transportation of Radiography Devices	1/23/81	All Radiography licensees
81-01	Possible Failures of General Electric Type HFA Relays	1/16/81	All power reactor facilities with OL or CP.
80-45	Potential Failure of BWR Backup Manual Scram Capability	12/17/80	All PWR facilities with an OL or CP
80-44	Actuation of ECCS in the Recirculation Mode While in Hot Shutdown	12/16/80	All PWR facilities with an OL or CP
80-43	Failures of the Continuous Water Level Monitor for the Scram Discharge Volume at Dresden Unit No. 2	12/5/80	All power reactor facilities with OL or CP
80-42	Effect of Radiation on Hydraulic Snubber Fluid	11/24/80	All power reactor facilities with OL or CP
80-41	Failure of Swing Check Valve in the Decay Heat Removal System at Davis- Besse Unit No. 1	11/10/80	All power reactor facilities with an OL or CP
80-40	Excessive Nitrogen Supply Pressure Actuates Safety- Relief Valve Operation to Cause Reactor Depressur- ization	11/10/80	All power reactor facilities with OL or CP

OL = Operating Licenses
CP = Construction Permits

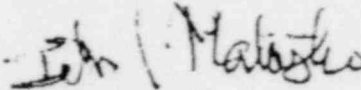
FEB 27 1981

TO: Regional Directors
(Word Processing Unit)

FROM: Beth Matosko: IE:HQ

The enclosed is attachment 1 to IE Information Notice No. 81-04 to
be issued today, 2/27/81.

CONTACT: W. J. Collins
49-28181


Beth Matosko
Administrative Branch, IE

2/27/81
145
KW

SRV's

PLANT: SURRY 1

NSSS: (W)

A/E: SFW

MAIN STEAM LINE ~
TO SRV HEADER CONN.
(TYPICAL)

SRV HEADER

30"

~18 ft.

'T' Fitting

30"

TO MSIV

TO ST. GEN.

ZONE OF CRACKING

1.1"

1.8"

~1" ~1"

CONTAINMENT
AUX. BLDG.

