

Consolidated Edison Company of New York, Inc.
Indian Point Station
Broadway & Bleakley Avenue
Buchanan, NY 10511
Telephone (914) 734-5340

June 22, 1995

Re: Indian Point Unit No. 2
Docket No. 50-247

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

SUBJECT: Request for Relief to Allow Continued Plant Operation with an "As Found" Through-Wall Leak in the Service Water Piping in Accordance with 10 CFR 50.55a (g)(6)(i) and NRC Generic Letter (GL) 90-05

The purpose of this letter is to request NRC approval to allow a through-wall leak in the Service Water (SW) piping to be left in the "as found" condition. Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel code specifies code acceptable repair methods for flaws that exceed code acceptance limits for the piping that is currently in service.

Consolidated Edison of New York, Inc., has determined that a code repair is not practical under present plant configuration and conditions and requests approval of a Section XI repair relief in accordance with 10 CFR 50.55a (g)(6)(i) and NRC Generic Letter (GL) 90-05.

While conducting a liquid penetrant test in connection with a non-related repair on a section of #22 Service Water Pump Strainer 3" diameter blowdown piping, located in the SW Strainer Pit, on June 20, 1995, a through-wall leak was discovered. This section of piping has been designated as a moderate energy Quality Group C piping in accordance with Regulatory Guide 1.26. The leak has been characterized as a pinhole leak located approximately 1/2" from the centerline of the weld that connects the 3" stainless steel pipe to the main header. The leakage is basically considered as weepage which cannot be quantified independently from existing pipe sweat.

Ultrasonic testing (UT) has been conducted on the affected area and has neither identified the pinhole nor has there been any wall thinning in the area. Evaluation of the pinhole in accordance with the approach contained in Enclosure 1 of GL 90-05 has determined that plant operation with this condition unaddressed by a repair meets pipe design requirements for both normal and abnormal conditions, including a Seismic Safe Shutdown. The weepage "as is" poses no housekeeping problems relating to itself or surrounding safety equipment. There is no significant flow diversion threat from this leak to the system cooling function requirements.

A repair meeting code acceptable requirements is impractical at this time due to the inability to obtain isolation without drainage of the entire associated Service Water Header (presently designated as the non-essential header).

9507050435 950622
PDR ADDCK 05000247
P PDR

Accl

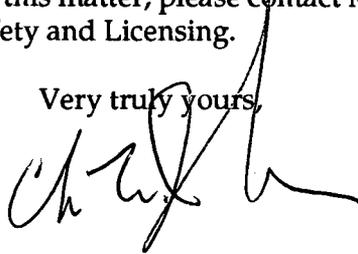
An augmented inspection of the piping will be established to institute qualitative visual inspection on a weekly basis and UT inspection on a quarterly basis.

Relief of Section XI permanent code repair is being requested until such time as plant conditions allow the piping to be isolated from the header. This period will not exceed the next scheduled outage which allows isolation from the header or the next refueling outage, whichever occurs first.

Accordingly, Consolidated Edison of New York, Inc., requests relief from ASME Code, Section XI, to allow continued plant operation without a Code approved repair of the affected SW piping as provided by GL 90-05. The detailed basis for the acceptability of not performing a Code acceptable repair is attached.

Should you have any questions regarding this matter, please contact Mr. Charles W. Jackson, Manager, Nuclear Safety and Licensing.

Very truly yours,



Enclosures:

1. Ultrasonic Thickness Measurement Record Sheet
2. Thru Wall Flaw Evaluation

cc: Mr. Thomas T. Martin
Regional Administrator - Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Francis J. Williams, Jr., Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
US Nuclear Regulatory Commission
Mail Stop 14B-2
Washington, DC 20555

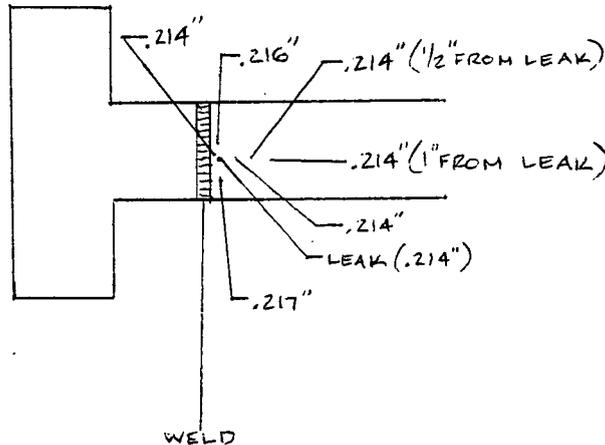
Senior Resident Inspector
US Nuclear Regulatory Commission
PO Box 38
Buchanan, NY 10511

CON EDISON
QUALITY ASSURANCE
INDIAN POINT STATION

QA-8400 REV. 1
ATTACHMENT 2

ULTRASONIC THICKNESS MEASUREMENT RECORD SHEET

DATE: 06/21/95 PROCEDURE: QA-9001
INSTRUMENT: PANAMETRICS #26 DL GAGE WORK ORDER NO.: NP-95-78800
TYPE/SIZE TRANSDUCER: DT94/5.0MHz VELOCITY SETTING: .2260.4SEC
CALIBRATION BLOCK: MINIMUM .050" MAXIMUM .750"
SYSTEM: SW COMPONENT: ZURN STRAINER DRAIN PIPE SIZE: 3" SCH. 40
TYPE COUPLANT: SONIC TYPE: AC BL
RECORD RESULTS WITH OR WITHOUT SKETCH: _____
REFERENCE OIR 95-06-641



RECORD COPY

PERFORMED BY: [Signature] 6-21-95 ASSISTED BY: [Signature] 6/21/95
LEVEL II

Evaluation of 3" line 409-2 (22 Zurn Strainer blowdown line) with a pinhole.

This stainless steel line developed a pinhole leak approximately 1/8" from the toe of the weld between the strainer discharge line and the first tee. (Ref. OIR-95-06-641). The pinhole is very tiny and is barely weeping system fluid. Condensate on the line masks the leak completely.

UT readings around the pinhole are uniform and indicate full wall thickness.

Based upon past failures of stainless steel in the Service Water system, this pinhole is due to pitting under a deposit where the protective oxide coating was damaged. A lack of oxygen prevents the oxide coating from forming and the pit continues through the pipe wall.

This is a very localized condition, there is no general or local wall thinning and it is a rounded flaw. Assuming it was a linear indication with a 1/32" length a Through Wall Flaw evaluation in accordance with NRC Generic Letter 90-05 was performed (see attached). The evaluation indicates that the flaw is stable and will not propagate.

Based upon the above the line with the pinhole meets Design requirements.

R. Altados
6-22-95

Thru Wall Flaw Evaluation

FLAW DESCRIPTION-

3" Service Water line 409-2 (22 Zurn Strainer Blowdown Line)
Pinhole 1/8" from toe of weld between strainer discharge
line and first tee. (Stainless steel line)

INPUTS

S = stress at defect= SE= allowable stress (B31.1)=
D= OD = P= des. pressure =
d= ID = y= B31.1 coef. (para 104.1.2) =
A= add wall (B31.1)= 2a= length of flaw at t min =

CALCULATIONS

$t_m = \text{min wall} = (P \cdot D / (2 \cdot (SE + P \cdot y))) + A =$
 $R = \text{mean pipe radius} = (D + d) / 4 =$
 $r = R / t_m$
 $K = 1.4 \cdot S \cdot F \cdot \text{Sq rt}(3.1416 \cdot a) =$
 $F = 1 + A \cdot 1.5 \text{rt}(c) + B \cdot 2.5 \text{rt}(c) + C \cdot 3.5 \text{rt}(c) =$
 $c = a / (3.1416 \cdot R) =$
 $A = -3.26543 + 1.52784 \cdot r - 0.072698 \cdot r \text{ sq} + 0.016011 \cdot r \text{ cube} =$
 $B = 11.36322 - 3.91412 \cdot r + 0.18619 \cdot r \text{ sq} - 0.004099 \cdot r \text{ cube} =$
 $C = -3.18609 + 3.84763 \cdot r - 0.18304 \cdot r \text{ sq} + 0.00403 \cdot r \text{ cube} =$

ACCEPTANCE

Carbon Steel- K must be less than 35,000
Stainless Steel- K must be less than 135,000
K= OK

This evaluation utilizes B31.1 for determination of min wall thickness required.

The approach evaluates the stability of the flaw by linear elastic fracture mechanics as described in NRC Generic letter 90-05.

W. Walters 6/22/95
J. Keller 6/22/95