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October 4, 1999

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

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555-0001

Subject: Request for Relief from ASME Code Requirements

Reference: NRC Information Notice 98-42: Implementation of 10 CFR 50.55a(g) Inservice Inspection Requirements

Pursuant to 10 CFR 50.55a(g)(5)(iii), Consolidated Edison Company of New York, Inc. (Con Edison) hereby submits three (3) requests for relief from the requirements of ASME Boiler & Pressure Vessel Code Section XI, due to the inability to obtain access to "essentially 100 percent" of the weld examination area. Additional staff guidance, relative to these relief requests (# 50, 51, and 52) was provided in NRC Information Notice 98-42. The specific areas determined by Con Edison to be impractical for these examinations are described in the attachment to this letter.

No new regulatory commitments are being made by Con Edison in this correspondence.

Should you or your staff have any questions regarding this matter, please contact Mr. John McCann, Manager, Nuclear Safety & Licensing.

Very truly yours,

Attachments

9910190141 991004
PDR ADOCK 05000247
Q PDR

A047

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ATTACHMENT

Relief Request Nos. 50, 51, and 52

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247
October 1999

RELIEF REQUEST NUMBER 50

COMPONENT IDENTIFICATION

Component:	Steam Generator
Code Class:	Quality Group B
References:	IWC-2500 Table 1
Examination Category:	C-B
Item Number:	C2.21
Description:	Nozzle to Shell Weld in Vessels > ½"

CODE REQUIREMENT

10 CFR 50.55a(g)(4), requires, "...coverage within the extent practical ..." [or "greater than 90%" as clarified in NRC Information Notice 98-42]

BASIS FOR RELIEF

Pursuant to 10 CFR 50.55a(a)(3)(ii), relief is requested on the basis that complying with the greater than 90% requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Indian Point 2 was designed prior to the existence of the ASME Section XI Code, and the design requirement for inspection access. A ring designed to hold insulation was permanently attached to the steam generator two inches below the feedwater nozzle. This ring prevents the complete ultrasonic coverage of a 26 inch area near the 6 o'clock position of the nozzle. Estimated coverage for the complete examination was calculated to be 80.4%. (See Attachment 1 for a photograph of the insulation ring and limitation.)

Due to nozzle configuration, the examination can only be performed from one side. The insulation ring prevents a complete full V exam from the shell side in the vicinity of the ring. The remaining 95 inches of weld are not impeded and a full V 100% ultrasonic examination is performed on the remaining nozzle to shell weld.

An ultrasonic examination, using multiple ultrasonic angles, is performed from above and below the insulation ring. (See Attachment 2, for a coverage plot of the nozzle and the interference caused by the insulation ring.) This provides sound into the area of interest, and would identify cracks that are propagating through wall.

RELIEF REQUEST NUMBER 50
(Page 2 of 2)

PROPOSED ALTERNATIVE PROVISIONS

Con Edison will continue to inspect the nozzle to shell weld of the feedwater nozzle from the accessible surfaces, constituting at least 80.4% of coverage. This examination, combined with the 100% surface examination and VT-2 visual leak examination, provides an acceptable level of quality and safety.

PERIOD FOR WHICH RELIEF IS REQUESTED

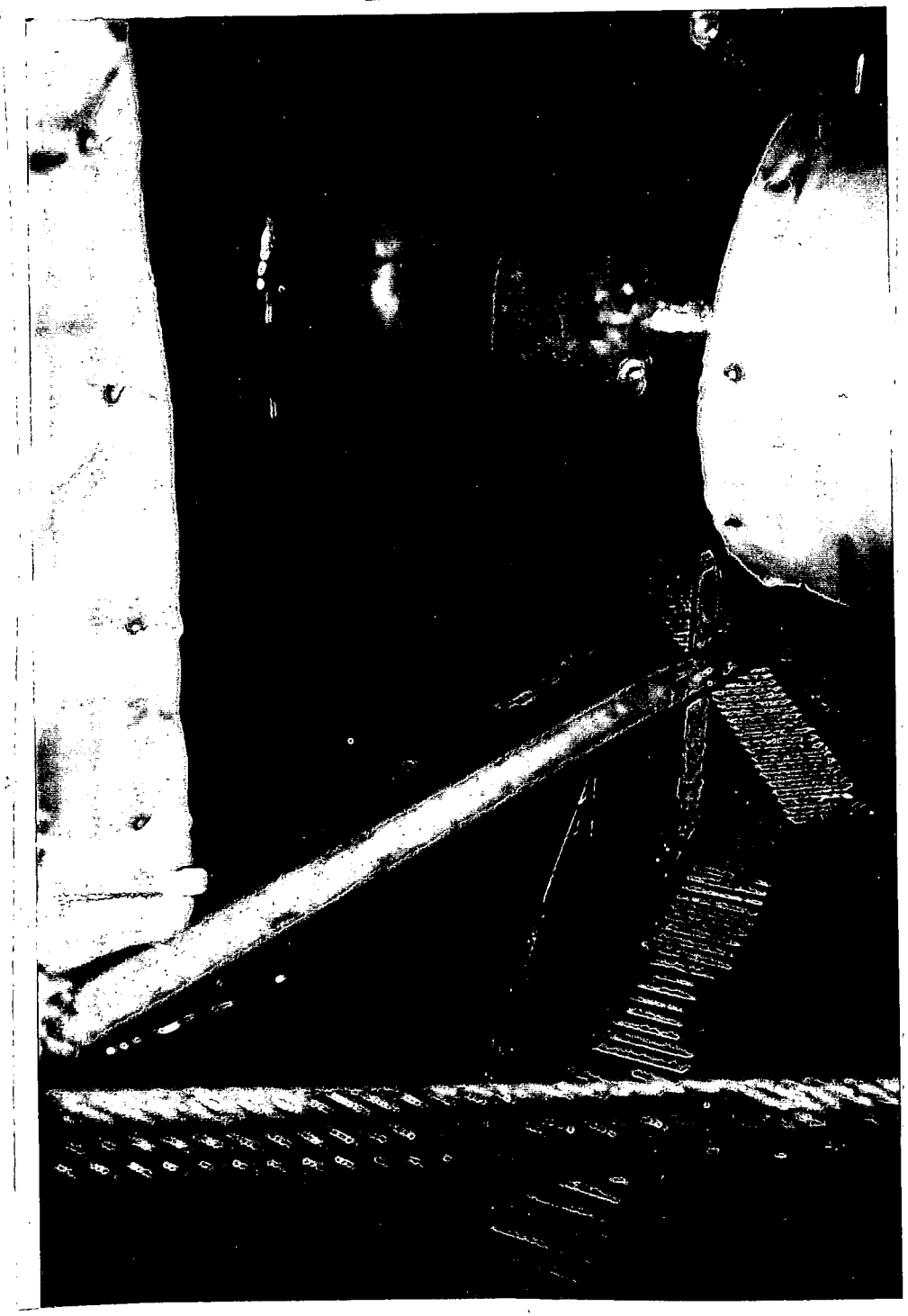
Relief is requested for the Third Inspection Interval, July 1, 1994 through June 30, 2004. Furthermore this interval has been extended to May 18, 2005 as discussed in Con Edison to USNRC letter dated April 9, 1999.

JUSTIFICATION FOR RELIEF

The proposed ultrasonic coverage of 80.4%, combined with the 100% surface examination and VT-2 leak examination provides an acceptable level of quality and safety.

Removal of the insulation support ring is difficult, costly, and constitutes a hardship without a compensating increase in the level of quality and safety of the component.

RELIEF REQUEST NUMBER 50
Attachment 1

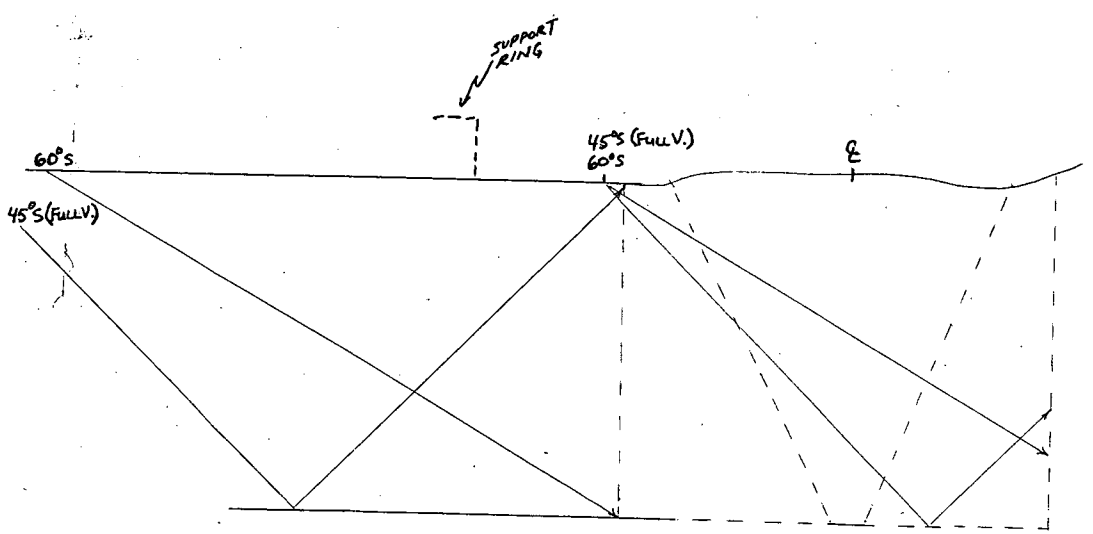


RELIEF REQUEST NUMBER 50
Attachment 2

PACKAGE IPP-97-SGN21.2-004

COVERAGE PLOT

SGN-21-2



TWL 5-24-97

121" OF WELD MATERIAL
26" OF LIMITATION AT BOTTOM OF NOZZLE DUE TO INSULATION SUPPORT RING LOCATION 2" FROM TOE OF WELD 80.4% EXAMINATION COVERAGE LIMITATION FROM 45" CW TO 71"

AT NO TIME CAN 90% BE ACHIEVED UNLESS SUPPORT RING CAN BE REMOVED.

FEEDWATER
NOZZLE
SGN-21-2

TWL 5-24-97

[signature], LVII, 5-15-97

[illegible] 5/29/97

RELIEF REQUEST NUMBER 51

COMPONENT IDENTIFICATION

Component:	Safety Injection System
Code Class:	Quality Group A
References:	IWB-2500 Table 1
Examination Category:	B-J
Item Number:	B09.11
Description:	Circumferential Welds 4" or Larger
Item Identifier	Line 351 Weld 351-2

CODE REQUIREMENT

10 CFR 50.55a(g)(4), requires, "...coverage within the extent practical ..." [or "greater than 90%" as clarified in NRC Information Notice 98-42]

BASIS FOR RELIEF

Pursuant to 10 CFR 50.55a(a)(3)(ii), relief is requested on the basis that complying with the greater than 90% requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Indian Point 2 was designed prior to the existence of the ASME Section XI Code, and the design requirement for inspection access. The weld configuration prohibits coverage greater than 90% from one direction, and greater than 50% from two other directions. The weld is located in a high radiation area at the junction between the 21 Safety Injection System accumulator discharge pipe and the 21 Reactor Coolant System primary loop piping.

An ultrasonic examination, using multiple ultrasonic angles, is performed from both sides of the weld, as geometry permits. (See Attachment 1 for a coverage plot) Due to the weld configuration, additional coverage can not be obtained without extensive weld conditioning. Based on the weld profile developed using straight beam UT and contour gages, the amount of weld conditioning required to increase coverage would cause the weld thickness to violate minimum wall requirements. Furthermore, the weld conditioning which consists of extensive weld buildup and machining, is time consuming, is within a high radiation area, and very expensive. The current examination covers the area of interest to 90% in one direction, and provides sound into the area of interest, that would identify cracks that are propagating through wall. To perform extensive welding and machining within a high radiation area constitutes both a hardship and unusual difficulty without a compensating increase in quality or safety.

RELIEF REQUEST NUMBER 51
(Page 2 of 2)

PROPOSED ALTERNATIVE PROVISIONS

Con Edison will continue to inspect weld 351-2 using multiple ultrasonic angles to provide the maximum coverage possible. This examination combined with the 100% surface examination and VT-2 visual leak examination that are also required provides an acceptable level of quality and safety.

PERIOD FOR WHICH RELIEF IS REQUESTED

Relief is requested for the Third Inspection Interval, July 1, 1994 through June 30, 2004. Furthermore this interval has been extended to May 18, 2005 as discussed in Con Edison to USNRC letter dated April 9, 1999.

JUSTIFICATION FOR RELIEF

The proposed ultrasonic coverage of 90% from one direction and 50% from the other direction, combined with the required 100% surface examination and VT-2 leak examination provides an acceptable level of quality and safety.

Traditional weld conditioning to increase coverage will cause the weld to exceed the minimum wall requirements. Performing extensive welding and machining in a high radiation area would pose ALARA justification challenges, and also be difficult and costly; it would,therefore, constitute a hardship without a compensating increase in the level of quality and safety.

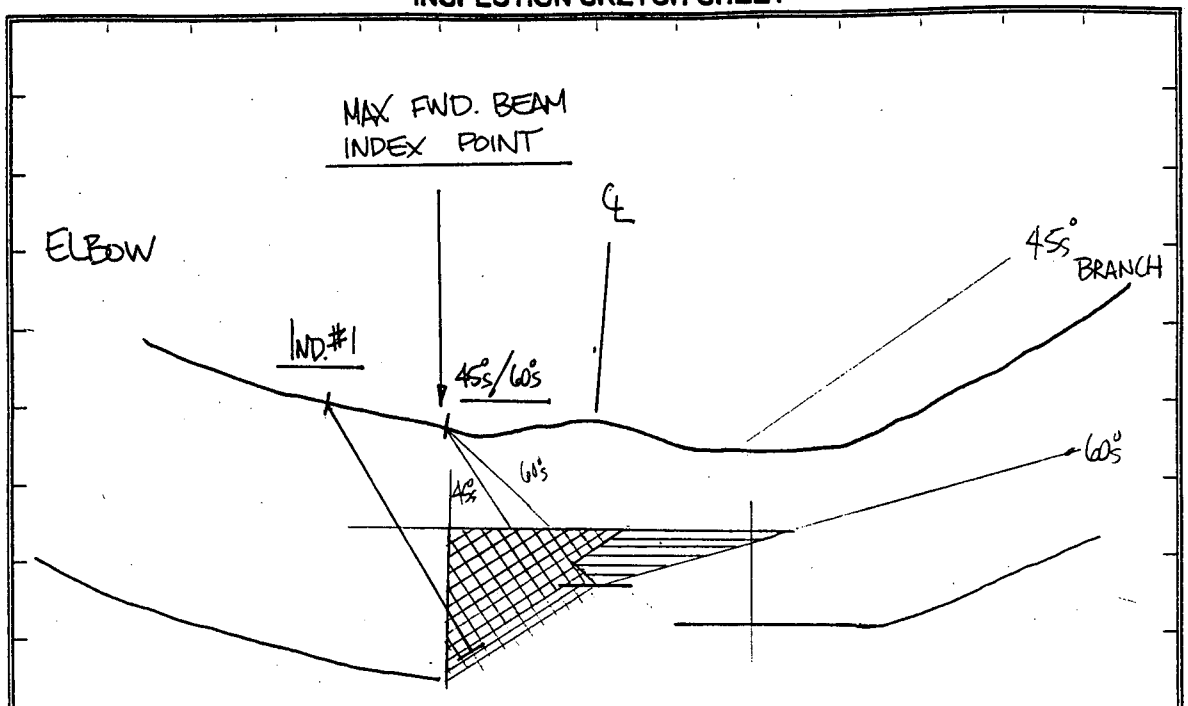
RELIEF REQUEST NUMBER 51
Attachment 1

Coverage Plot

Raytheon Engineers & Constructors

Page 3 of 41

INSPECTION SKETCH SHEET



351-2
DWG
No.
B20903-S

INDICATION / COVERAGE PLOT

— TWO DIRECTION COVERAGE 50%.
— ONE DIRECTION COVERAGE 90%.

APB/KB
6/2/97

RELIEF REQUEST NUMBER 52

COMPONENT IDENTIFICATION

Component:	Residual Heat Removal Heat Exchanger
Code Class:	Quality Group B
References:	IWC-2500 Table 1
Examination Category:	C-A
Item Number:	C1.20
Description:	Head Circumferential Welds
Item Identifier	Welds RHX C22-1 and RHX C22-2

CODE REQUIREMENT

10 CFR 50.55a(g)(4), requires, "...coverage within the extent practical ..." [or "greater than 90%" as clarified in NRC Information Notice 98-42]

BASIS FOR RELIEF

Pursuant to 10 CFR 50.55a(a)(3)(ii), relief is requested on the basis that complying with the greater than 90% requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Indian Point 2 was designed prior to the existence of the ASME Section XI Code, and the design requirement for inspection access. The weld configurations and integral attachments near Weld C22-1 and the integral attachments near Weld C22-2 prohibit examination coverage greater than 80.6% and 85.7%, respectively. These welds were previously exempted from examination during Intervals 1, 2, and 3 due to high radiation field locations. The welds are still located in a high radiation area in the RHR heat exchanger cell; however, as a result of the 1995 RFO full system decontamination, these examinations are now manageable.

Weld RHXC-22-1 is a flange to shell type weld. One-sided access is adequate for two beam path coverage (See Attachment 1 "Coverage Plot") except in the areas of the nozzles and integral attachments. In those areas access is prohibited by the proximity of the nozzles and integral attachments. (See Attachment 2, "Limitation Sheet," and Attachment 3, "Photo of Nozzle and Integral Attachment Interference") Total coverage is estimated to be 80.6%.

Weld RHXC-22-2 is a standard head to shell weld. A two-sided examination is obtained using a full V calibration. (See Attachment 4 "Coverage Plot") Access is limited from one side in two 31.5 inch areas by two integral attachments (See Attachment 5 "Limitation Sheet" and Attachment 6 "Photo of Integral Attachment Interference") located on opposite sides of the vessel, 1.4 inches above the weld. Total coverage is estimated to be at least 85.7%.

RELIEF REQUEST NUMBER 52

Radiography is not possible due to the heat exchanger internals and the radiation levels associated with the heat exchanger and cell.

PROPOSED ALTERNATIVE PROVISIONS

The physical restrictions caused by the nozzles and integral attachments prevent any type of ultrasonic scanning in the areas where relief is being sought. Con Edison will continue to inspect welds RHXC-22-1 and RHXC-22-2 using 45 degree ultrasonic angles and full V calibration to provide the maximum coverage possible. This examination combined with the VT-2 visual leak examination provides an acceptable level of quality and safety.

PERIOD FOR WHICH RELIEF IS REQUESTED

Relief is requested for the Third Inspection Interval, July 1, 1994 through June 30, 2004. Furthermore this interval has been extended to May 18, 2005 as discussed in Con Edison to USNRC letter dated April 9, 1999.

JUSTIFICATION FOR RELIEF

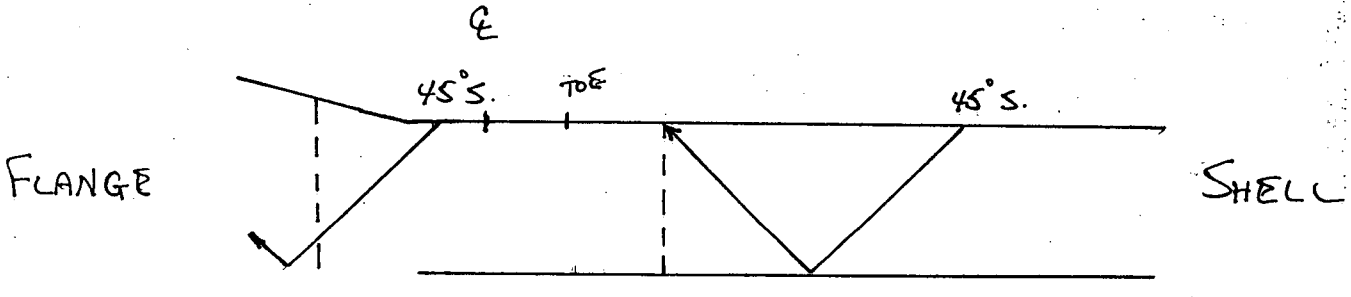
Extensive structural modifications to the heat exchanger would be required in order to increase examination coverage access to Welds C22-1 and C22-2. This would represent unusual difficulty without a compensating increase in the level of quality and safety.

The proposed ultrasonic coverage of 80.6% for Weld C22-1 and at least 85.7% for Weld C22-2 in combination with the required VT-2 leak examination provides an acceptable level of quality and safety.

RELIEF REQUEST NUMBER 52
Attachment 1

Pg

COVERAGE PLOT
RHXC-22-1

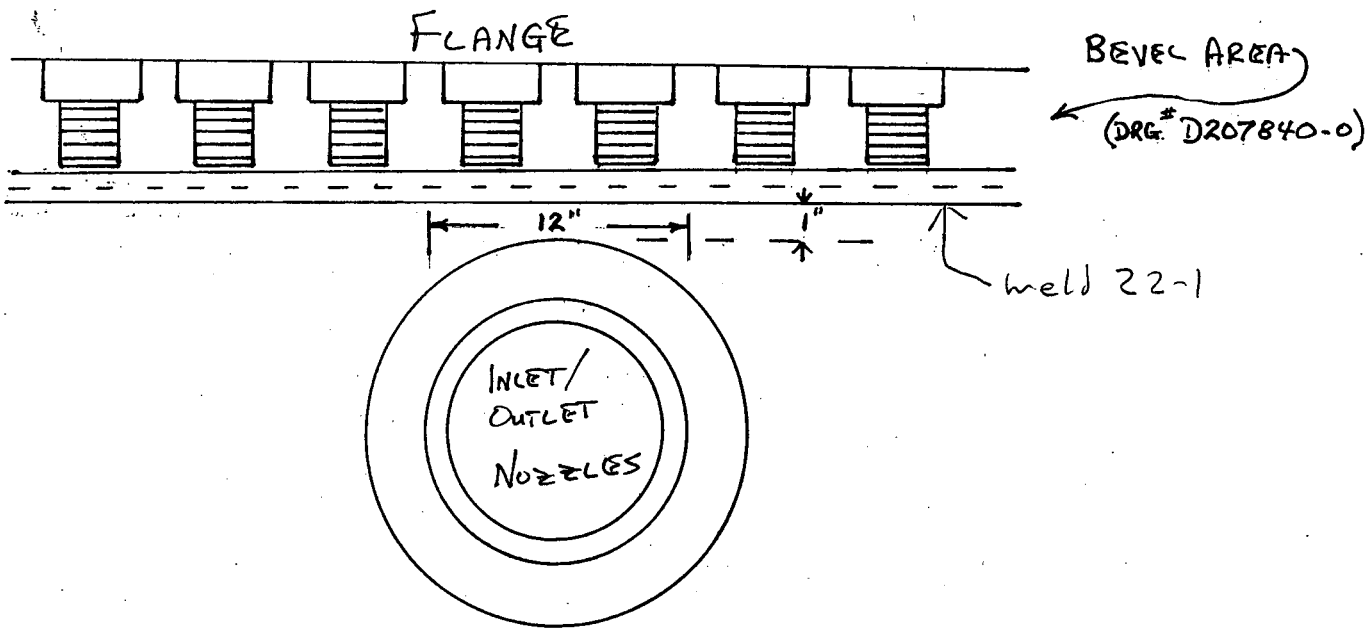


RELIEF REQUEST NUMBER 52
Attachment 2

PS 509

LIMITATION SHEET

RHXC-22-1



EXAM IS ONE-SIDED 360°, AND FURTHER LIMITED BY INLET & OUTLET NOZZLE REINFORCING PADS TO "W" of 1" FROM WELD TOE, FOR 6" EITHER SIDE of TDC.

CIRC. SCANS ACHIEVED 36.11% of TOTAL COVERAGE DUE TO LIMITATION @ FLANGE BEVEL
AX SCANS ACHIEVED 44.5% of TOTAL COVERAGE DUE TO NOZZLE REINFORCING PLATE & FLANGE BEVEL.

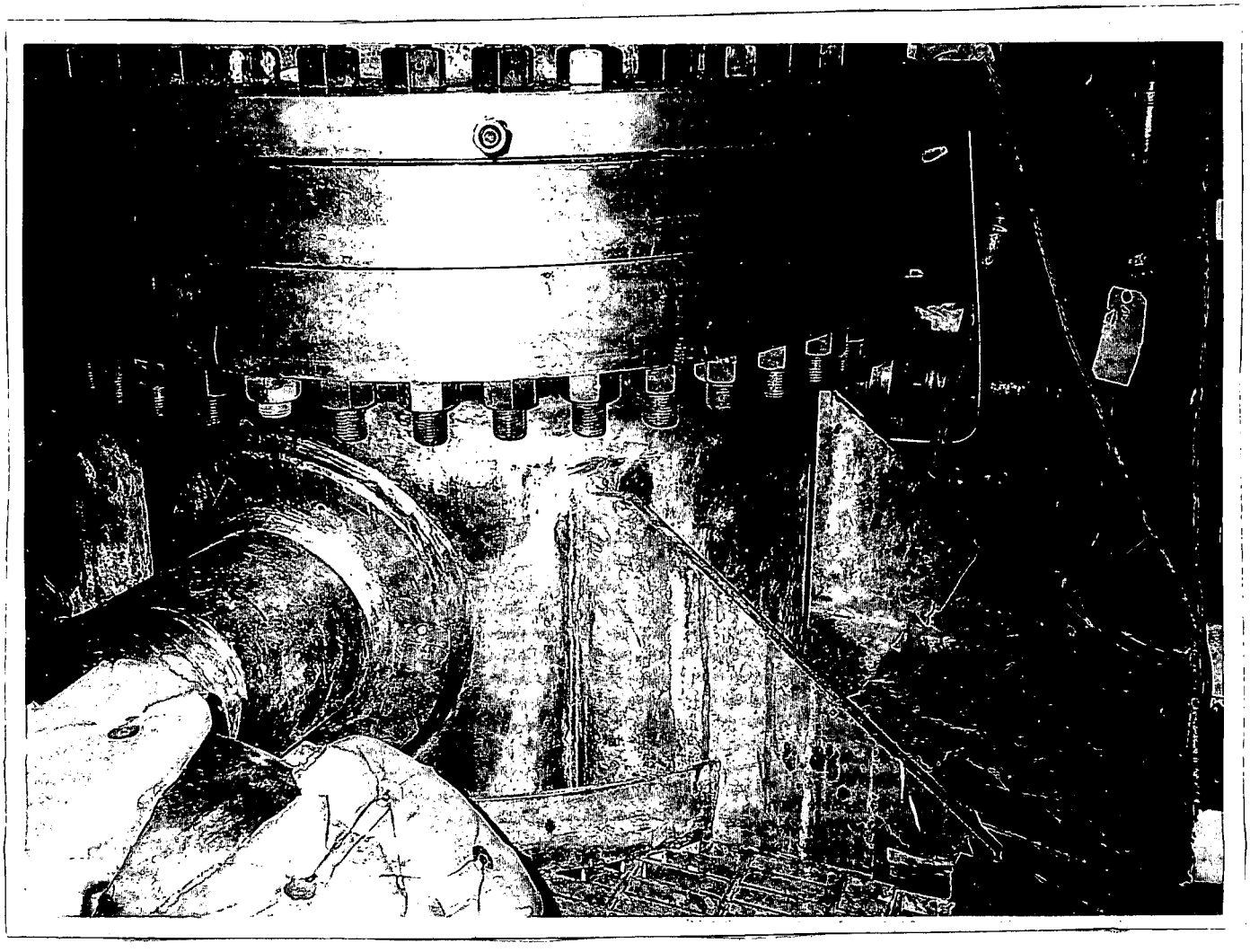
ACHIEVED 80.61% of TOTAL REQUIRED VOLUME

PSE 5/30/97

Walter Miller, LYE 5-27-97

RELIEF REQUEST NUMBER 52
Attachment 3

Photo of Nozzle and Integral Attachment Interference

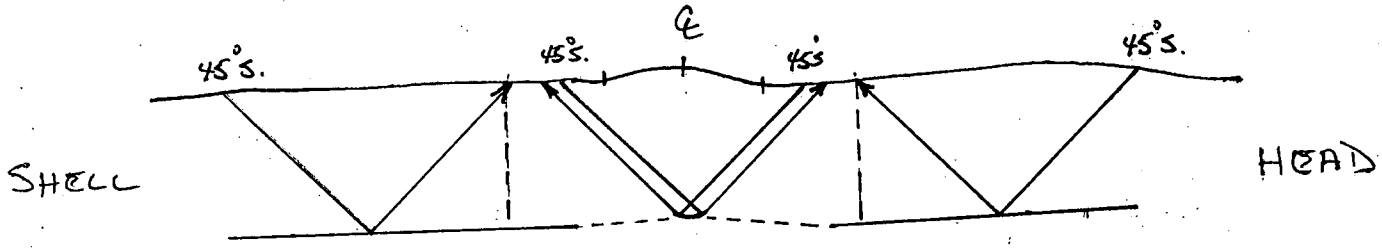


RELIEF REQUEST NUMBER 52
Attachment 4

Pg 7o

COVERAGE PLOT

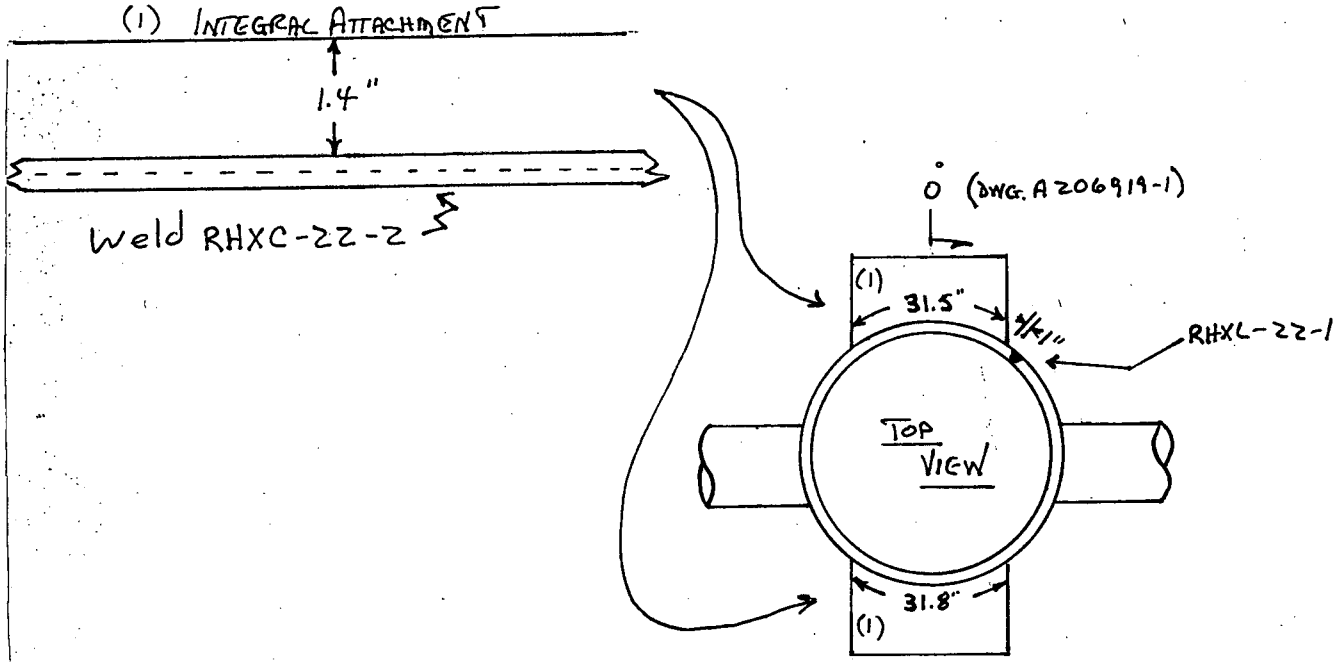
RHXC-22-2



RELIEF REQUEST NUMBER 52
Attachment 5

LIMITATION SHEET
RHXC-22-2

SIDE VIEW



No Limitation Circ Exam = 50%
No Limitation Bottom Side = 25%
Limited to 43% of Top Side = .43 X 25% = 10.75%
85.75% TOTAL COVERAGE

RELIEF REQUEST NUMBER 52
Attachment 6

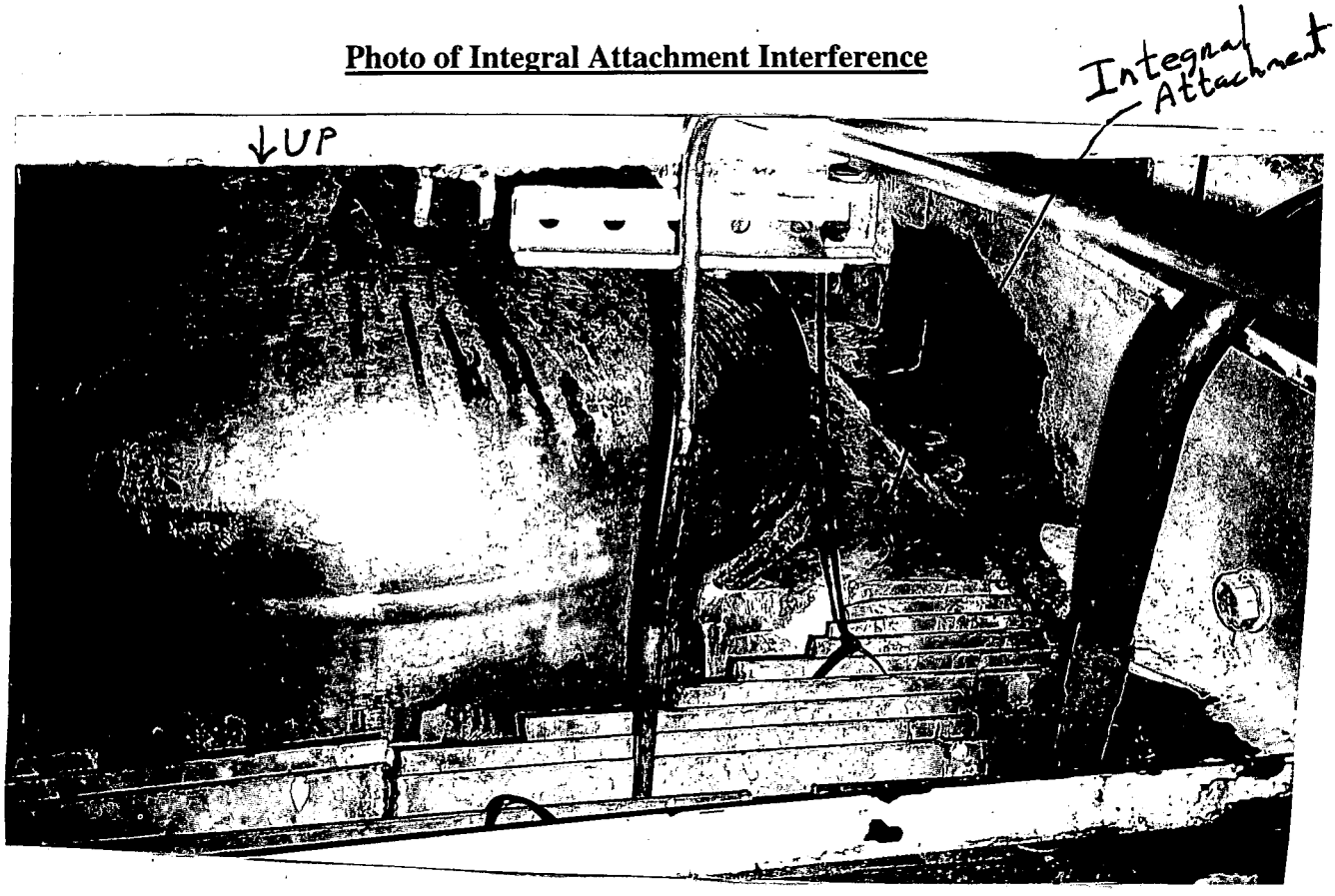
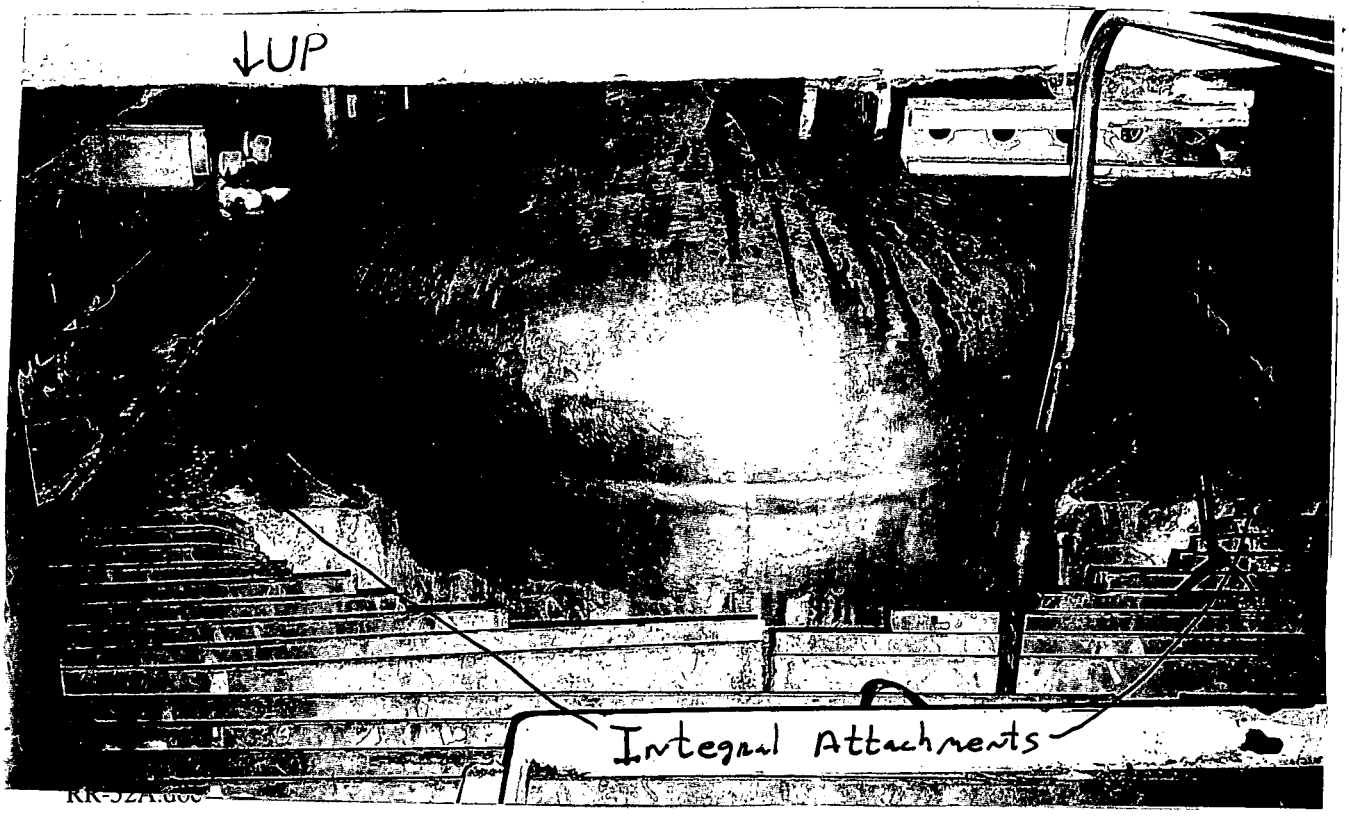



Photo of Integral Attachment Interference