FPL.

February 13, 2015
L-2015-020
10 CFR 50.55a

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

RE: Florida Power and Light Company
Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Closeout of the Fourth Ten-Year Inservice Inspection (ISI) Interval
Relief Requests Nos. 15, 16, 17

In accordance with 10 CFR 50.55a(g)(6), Florida Power & Light Company (FPL) hereby requests approval of the attached Relief Requests 15, 16, and 17 as part of the closeout of the Fourth Ten-year Inservice Inspection (ISI) Interval Program for Turkey Point Units 3 and 4.

The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Rules for Inservice Inspection of Nuclear Power Plant Components, Section XI, 1998 Edition with Addenda through 2000 as amended by 10CFR50.55a, is the code of record for the Turkey Point Units 3 and 4 Fourth Ten-Year Inservice Inspection Interval.

Due to the configuration of the Reactor Vessel, it is impractical to meet the examination coverage requirements of the ASME Code, Section XI, 1998 Edition with Addenda through 2000, as clarified by Code Case N-460. ASME Code Category B-A weld and B-G-1 flange ligament surface are addressed in Relief Request No. 15. This relief is requested for both Turkey Point Units 3 and 4 and it is provided in Attachment 1.

Additionally, due to the configuration of the ASME Code Category B-A, C-A, C-B, C-F-1 and R-A welds, it is not possible to meet the examination coverage requirements of the ASME Code, Section XI, 1998 Edition with Addenda through 2000, as clarified by Code Case N-460. As such, Relief Requests No. 16 and No. 17 are requested for Turkey Point Unit 3 and Turkey Point Unit 4, respectively. These reliefs are provided in Attachments 2 and 3, respectively.

The attached reliefs are requested on the basis of Inservice Inspection impracticality. FPL has determined that the examinations addressed in the Relief Requests 15, 16, and 17 were performed to the extent possible. As discussed in the attachments, the use of the proposed alternative examinations for each of these reliefs provides assurance of an acceptable level of quality and safety.

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NRR

If you have any questions or require additional information, please contact Mr. Mitch Guth, Licensing Manager, at (305) 246-6698.

Sincerely,

T. Conroy
for Mike Kiley

Michael Kiley
Site Vice President
Turkey Point Nuclear Plant

Attachment

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

L-2015-020

ATTACHMENT 1

TURKEY POINT UNITS 3 AND 4

RELIEF REQUEST No. 15

TURKEY POINT UNITS 3 AND 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 15

Relief Request
In Accordance with 10 CFR 50.55a(g)(5)(iii)

--Inservice Inspection Impracticality--

1. ASME Code Component(s) Affected

Class 1 pressure retaining welds in the reactor pressure vessel (RPV).

2. Applicable Code Edition and Addenda

The Code of record for Turkey Point units 3 and 4 is the 1998 Edition with Addenda through 2000 of the ASME Boiler and Pressure Vessel Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components" as modified by 10CFR50.55a. The 1998 Edition with Addenda through 2000 was utilized for ASME Section XI, Appendix VIII.

3. Applicable Code Requirement

Exam Cat.	Item No.	Examination Requirements
B-A	B1.11	Essentially 100% volumetric examination of all circumferential shell welds.
B-A	B1.30	Essentially 100% volumetric examination of the shell to flange weld.
B-G-1	B6.40	Essentially 100% volumetric examination of the 1 inch annular surface of flange surrounding each stud hole.

As defined by 10CFR50.55a(g)(6)(ii)(A)(2) and ASME Code Case N-460, essentially 100% means more than 90% of the examination volume of each weld where reduction in coverage is due to interference by another component or part geometry.

4. Impracticality of Compliance

Due to the configuration of the Reactor Vessel, it is impractical to meet the examination coverage requirements of the ASME Code, Section XI, 1998 Edition with Addenda through 2000, as clarified by Code Case N-460. Relief is requested in accordance with 10 CFR 50.55a(g)(5)(iii). These areas were found during the 4th 10-year inservice inspection interval.

When examined, the welds listed within this request did not receive the required code volume coverage due to their configuration and/or the presence of permanent attachments. These scanning limitations prohibit essentially 100% ultrasonic examination coverage of the required examination volume, but 100% of the accessible welds were covered. The volumetric coverage obtained and angle(s)/mode(s) used for

the inner 15% T and outer 85% T is provided in Table 1.

Described below, coupled with figures, are details of the examination limitations by weld description. Figure 1 provides an illustration of the contact UT head used for scanning from the vessel shell. Figures 2 through 8 provide the dimensions and locations of obstructions and views of each of the affected welds showing the interference caused by the permanent attachments on the Trans World System (TWS) robot and the effect of the obstructions on scanning. Figure 6 provides the dimensions and locations of obstructions and views for the Flange Ligament examination.

RPV Lower Shell to Lower Head Ring Weld (3-WR-31 and 4-WR-31)

Examination Category B-A, Item B1.11

The mechanized scanning of the lower shell to lower head ring welds 3-WR-31 and 4-WR-31 are limited due to interference from the core support lugs. Figure 2 and 3 provides an illustration of the weld volume limitation due to the instrumentation tubes

The examination of the Figure IWB-2500-1 A-B-C-D volume is limited due to the proximity of the instrumentation tubes. Access to approximately 15% of the examination volume is restricted. The remaining 85% of the examination volume was examined with techniques which have been qualified by demonstration in accordance with ASME Section XI, Appendix VIII, Supplements 4 and 6 of the 1998 Edition with Addenda through Section XI, using the Performance Demonstration Initiative Protocol. This weld was examined from both sides of the weld, scanning both parallel and perpendicular. For unit 3, ultrasonic examination revealed no indications and for unit 4, ultrasonic examination revealed four acceptable small fabrication flaws in the weld. All recorded indications were characterized as subsurface in accordance with the ASME Code Section XI, 1998 Edition up to and including the 2000 Addenda.

RPV Upper Shell-to-Flange Weld (3-WR-18 and 4-WR-18)

Examination Category B-A, Item B1.30

The upper shell-to-flange weld 3-WR-18 and 4-WR-18 is examined from the shell side and from the flange seal surface. The examination performed from the flange seal surface was not limited by configuration. Figure 4, 5 & 6 shows the inside surface scan limitations and the location of the areas of incomplete coverage to the mechanized scanning due to the presence of the keyways and Irradiation slots.

The examination of the Figure IWB-2500-4 A-B-C-D volume is limited due to the Keyways and Irradiation Slots. Access to approximately 25% of the examination volume is restricted. The remaining 75% of the examination volume was examined with ASME Code acceptable techniques. Additionally, the mechanized techniques employed for examination from the RPV inside surface have also been qualified by demonstration in accordance with ASME Section XI, Appendix

VIII, Supplements 4 and 6 of the 1998 Edition with Addenda through Section XI, using the Performance Demonstration Initiative Protocol. This weld was examined from both sides of the weld, scanning both parallel and perpendicular. For unit 3, ultrasonic examination revealed three acceptable small fabrication flaws and for unit 4, ultrasonic examination revealed twelve acceptable small fabrication flaws in the weld. All recorded indications were characterized as subsurface in accordance with the ASME Code Section XI, 1998 Edition up to and including the 2000 Addenda.

RPV Threads in Flange (3-Lig-1 thru 58 and 4-Lig-1 thru 58)

Examination Category B-G-1, Item B6.40

The manual scanning of the 1 inch annulus surface around the RPV flange stud hole 3-Lig 1 thru 58 and 4-Lig 1 thru 58 is performed from the RPV flange surface. Figure 8 provides an illustration of the RPV flange surface limitation due to interference from the sealing surface configuration. There is a step-down groove on the flange surface where the O-ring fits. This causes an unparallel surface to perform the 0-degree examination.

The examination of the Figure IWB-2500-12 A-B-C-D-E-F-G-H volume is limited when scanning the carbon steel base material surrounding the stud holes due to the sealing surfaces configuration. Access to approximately 15.33% of the examination volume is restricted. The remaining 84.67% of the examination volume was examined with ASME Code acceptable techniques. The ultrasonic examination did not reveal any recordable or reportable flaws in accordance with the ASME Code Section XI, 1998 Edition up to and including the 2000 Addenda.

5. Burden Caused by Compliance

It is not possible to obtain ultrasonic interrogation of greater than 90% of the required examination volume due to interference caused by configuration and/or permanent attachments. Examinations are performed to the maximum extent possible. The Ultrasonic (UT) techniques for each weld or surface were reviewed to determine if additional coverage could be achieved. For the welds or surfaces listed above, it was not possible to remove the obstruction without significant work, increased radiation exposure, and/or damage to the plant.

6. Proposed Alternative and Basis for Use

Proposed Alternative

1) Periodic system pressure tests in accordance with ASME Section XI Category B-P, Table IWB-2500-1.

2) Conduct ultrasonic examinations to the maximum extent possible.

TURKEY POINT UNITS 3 AND 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 15

Basis

FPL performed inservice examinations of selected welds and surfaces in accordance with the requirements of 10CFR50.55a, plant technical specifications, and the 1998 Edition up to and including the 2000 Addenda, of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI. When a component has conditions, which limit the examination volume, Florida Power and Light is required to submit the information to the enforcement and regulatory authorities having jurisdiction at the plant site. This Relief Request has been written to address areas where those types of conditions exist and the required amount of coverage was reduced below the minimum acceptable.

FPL performed mechanized ultrasonic examinations of the reactor vessel during the Unit 3, March 2014 and Unit 4, September 2014 refueling outage.

10 CFR 50.55a(g)(4) recognizes that throughout the service life of a nuclear power facility, components which are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements set forth in the ASME Code to the extent practical within the limitations of design, geometry and materials of construction of the components.

FPL performed the examinations to the extent possible. There is no plant-specific, NextEra fleet or industry operating experience regarding potential degradation specific to the subject welds included in this relief request.

Leakage monitoring inside containment at Turkey Point Unit 4 is provided by the reactor cavity (containment) sump inlet flow monitoring system. This system has high level and alert status alarms in the control room. This system has Tech Spec required monitoring (TS 3/4.4.6.2.1(b)) at least once every 12 hours.

By letter dated November 13, 2012, FPL submitted relief request #10 to the U.S. Nuclear Regulatory Commission (NRC). The purpose of the relief request was to obtain permission to implement an alternative from certain provisions of the ASME Code, Section XI, 1998 Edition up to and including the 2000 Addenda, contained in the 4th 10-year interval inservice inspection (ISI) program. FPL proposes to use procedures, personnel, and equipment qualified to the requirements of ASME Section XI, Appendix VIII, Supplements 4 and 6 of the 1998 Edition with Addenda through 2000, as administered by the Electric Power Research Institute's (EPRI) Performance Demonstration Initiatives (PDI) program to conduct the reactor vessel upper shell-to-flange weld examination. The examinations from the inside surface will be implemented to achieve the maximum coverage possible utilizing procedures and personnel qualified by the PDI Program. The proposed alternative represents the best techniques, procedures, and qualifications available to perform UT examinations of RPV welds. The PDI Program addresses qualification requirements for each of the supplements that are defined in ASME Section XI, Appendix VIII. The applicable vendor procedure has been qualified in accordance with PDI's implementation of Supplements 4 and 6 of ASME Section XI, Appendix VIII. The NRC authorized the proposed alternative by letter dated November 29, 2013 (TAC NO. MF0086 and MF0087). The accessible areas of the shell weld were examined with personnel, equipment and procedures that were qualified by demonstration in accordance with Supplements 4 and 6 of the 1998 Edition up to and

including the 2000 Addenda of the ASME Code, Section XI, Appendix VIII, using the Performance Demonstration Initiative (PDI) protocol. These examinations were performed from both sides of the welds, scanning both parallel and perpendicular to the weld to the maximum extent possible. The examinations performed utilizing demonstrated and qualified techniques provided an equivalent or better examination than the requirements of ASME Section XI, 1998 Edition up to and including the 2000 Addenda.

FPL performed ultrasonic examinations of the remaining reactor vessel welds in accordance with the requirements of 10 CFR 50.55a, plant technical specifications, and the 1998 Edition up to and including the 2000, of ASME Section XI to the maximum extent possible. Additionally, the mechanized techniques employed for examination from the RPV inside surface have been demonstrated in accordance with Supplements 4 & 6 of the 1998 Edition up to and including the 2000 of the ASME Code Section XI, Appendix VIII, using the Performance Demonstration Initiative Protocol. The Ultrasonic (UT) techniques for each weld were reviewed to determine if additional coverage could be achieved. Access for examination of the affected welds from the outside of the reactor vessel is not possible. Access and permanently installed attachments inside the reactor vessel limit additional scanning of the welds included in this request for relief.

In addition to the required ultrasonic examination, the interior of the reactor vessel, including welded attachments, received a visual examination in accordance with Table IWB-2500-1, Examination Categories B-N-1, B-N-2 and B-N-3. The visual examinations revealed no relevant indications.

The subject welds were examined in the fourth interval during the 10-year reactor vessel examination. All flaws identified in the welds were characterized as subsurface fabrication flaws in the weld.

The extent of examination volume achieved ultrasonically, the alternate scans performed, and the system pressure tests provide assurance of an acceptable level of quality and safety.

7. Duration of Proposed Alternative

This relief request is applicable to the Turkey Point unit 3 Fourth Inservice Inspection Interval which began February 22, 2004 and ended February 21, 2014 and the unit 4 Fourth Inservice Inspection Interval which began April 15, 2004 and ended April 14, 2014.

8. References

10CFR50.55a

ASME Section XI, "Rules For Inservice Inspection of Nuclear Power Plant Components," 1998 Edition with Addenda through 2000

ASME Section XI, Division 1, Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1"

TURKEY POINT UNITS 3 AND 4
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TABLE 1 CATEGORY B-A					
ASME Code Component	Component ID	Applicable Code Requirement and Weld Volume Coverage Obtained	Angle(s)/ Wave Mode		Impracticality of Compliance
			Inner 15% T	Outer 85% T	
RPV Lower Shell to Lower Head Ring Weld	3-WR-31 4-WR-31	Exam Category B-A Item No. B1.11 85% volume coverage	45L 70L	45L 45S	Inservice examination limited due to the core support lugs
RPV Upper Shell-to-Flange Weld	3-WR-18 4-WR-18	Exam Category B-A Item No. B1.30 75% volume coverage	45L 70L	45L 45S	Inservice examination limited due to interference with keyways and irradiation slots at 15^0, 105^0, 195^0, 285^0, 70^0, 80^0, 90^0, 130^0, 190^0, 310^0, 320^0, 330^0 and flange radius 360^0.

TABLE 1 CATEGORY B-G-1				
ASME Code Component	Component ID	Applicable Code Requirement and Weld Volume Coverage Obtained	Angle/ Wave Mode	Impracticality of Compliance
RPV Threads in Flange	3-Lig-1 thru 58 4-Lig-1 thru 58	Exam Category B-G-1 B6.40	0L	Inservice examination limited due to seal surface edge

TURKEY POINT UNITS 3 AND 4
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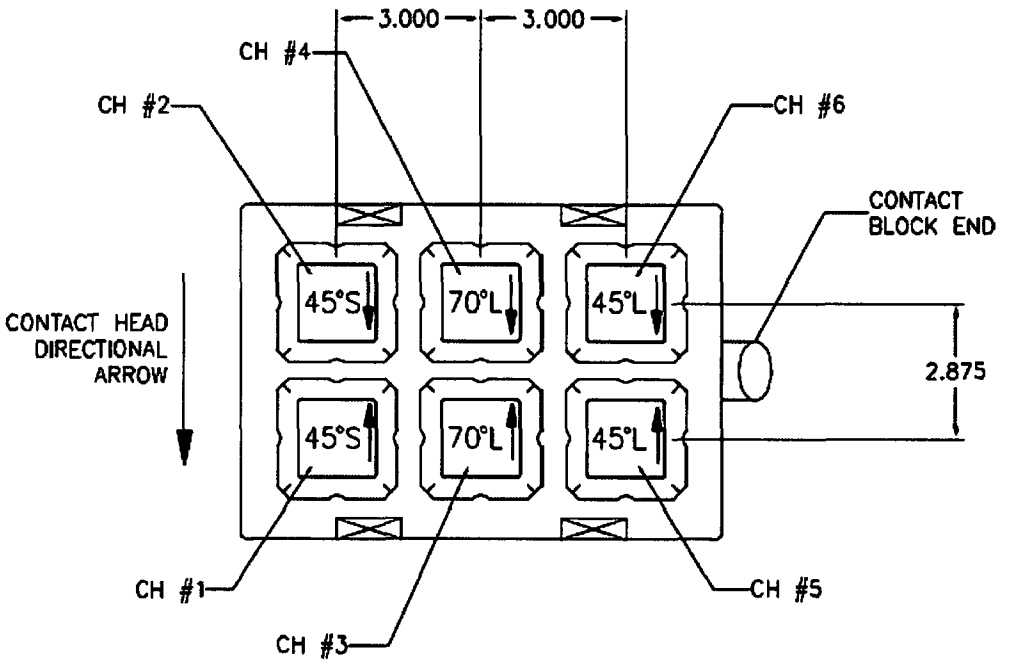

2x3 UT HEAD CONFIGURATION #3
FOR SHELL SCANNING
(AS VIEWED FROM BACK OF ROBOHAND COUPLING)

Illustration of the typical UT head configuration used for vessel shell weld scanning. Overall head dimensions are approximately 12" x 8".

Figure 1

TURKEY POINT UNITS 3 AND 4
FOURTH INSPECTION INTERVAL
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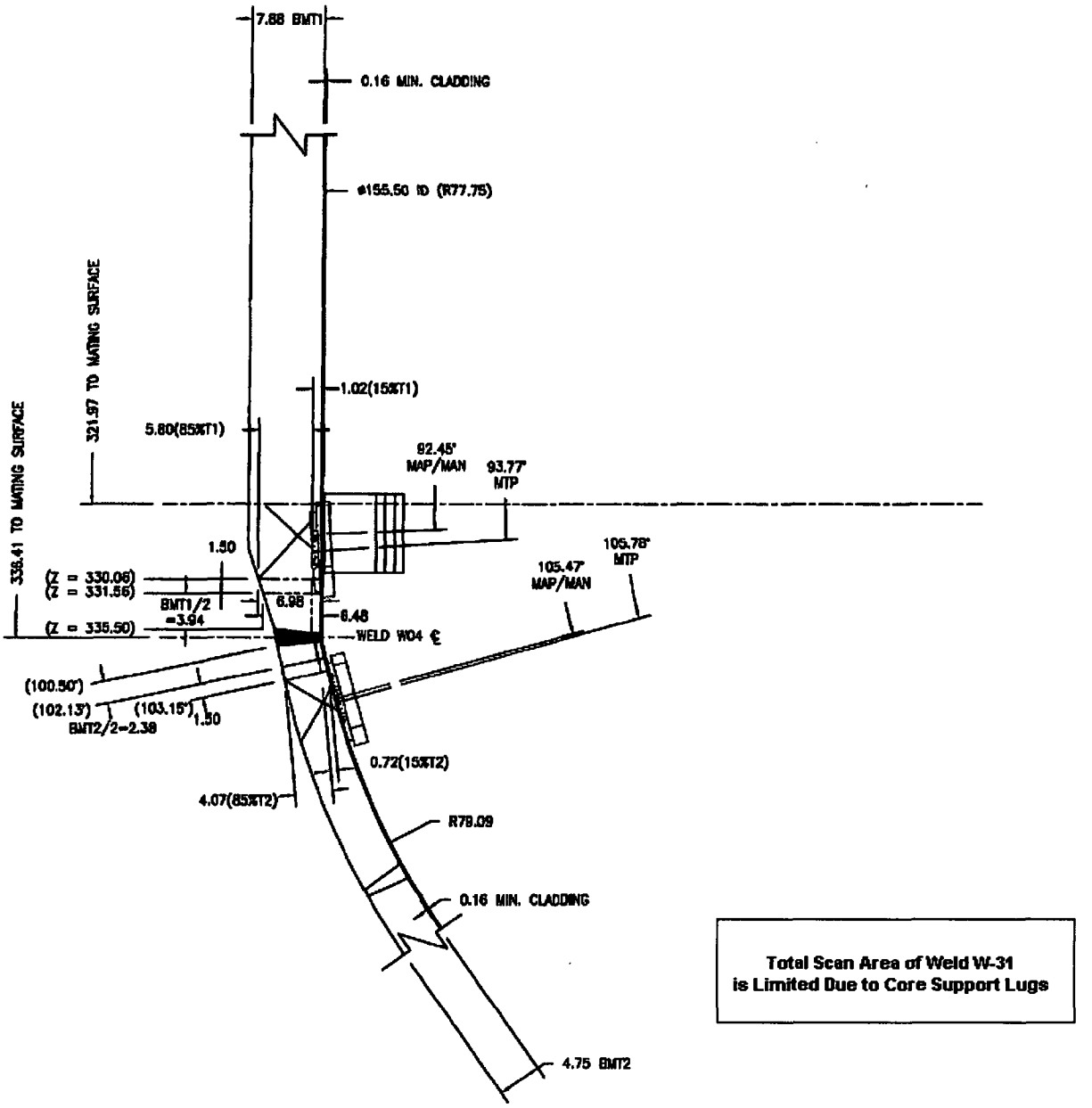
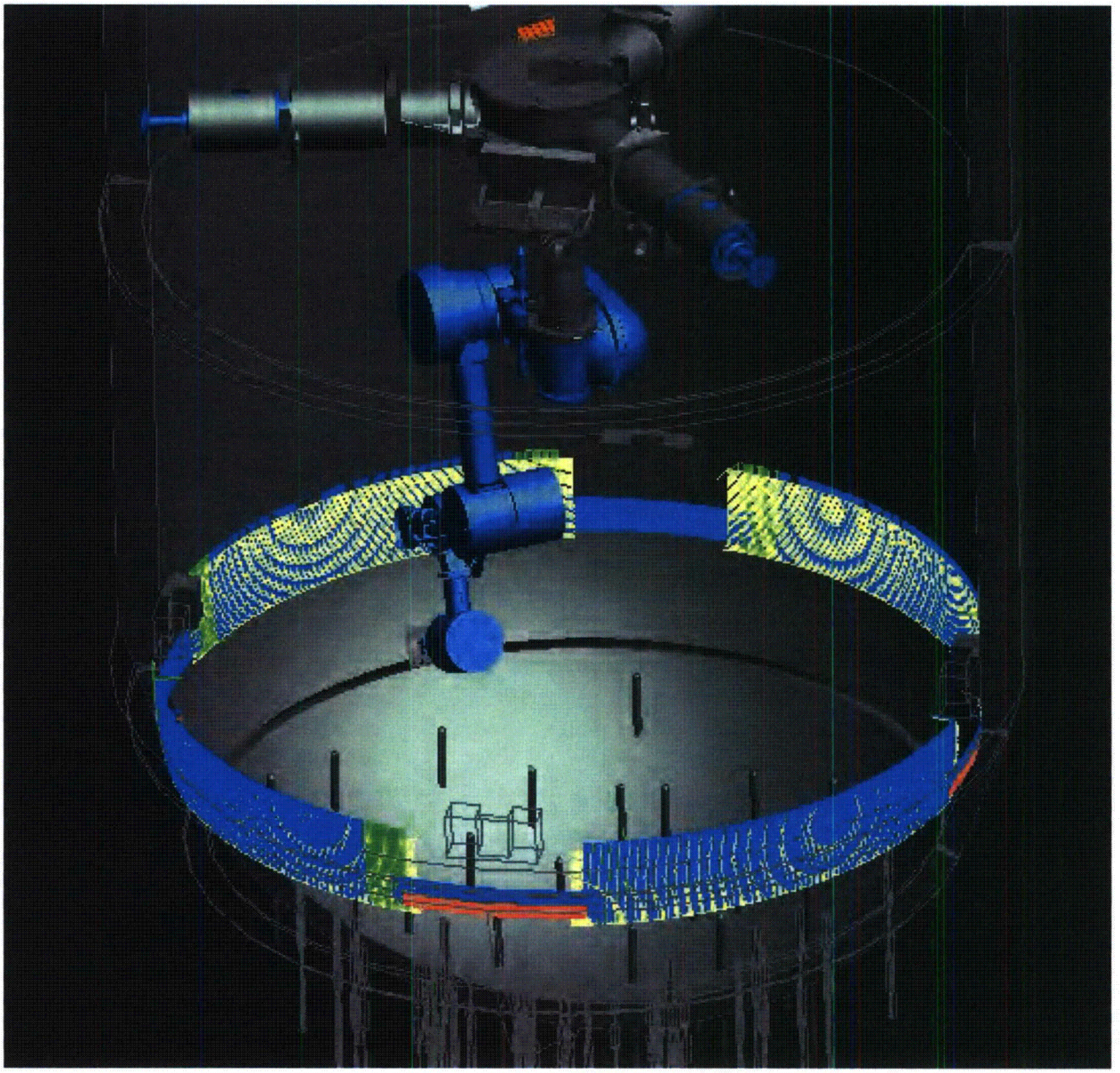


Total Coverage Achieved 85%

RPV Lower Shell to Lower Head Ring Weld (3-WR-31 and 4-WR-31)

Figure 2

TURKEY POINT UNITS 3 AND 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 15



View of TWS robot in vessel lower head region showing scan limitations caused by the Core Guide Lugs. The inspection area above the weld is limited by the Core Guide Lugs. The Core Guide Lugs restrict the UT head from scanning the entire weld. This limitation occurs at each lug set. Single sided scan parameters are used near obstructions to improve examination coverage. Coverage obtained on this weld is 85%.

RPV Lower Shell to Lower Head Ring Weld (3-WR-31 and 4-WR-31)

Figure 3

TURKEY POINT UNITS 3 AND 4
FOURTH INSPECTION INTERVAL
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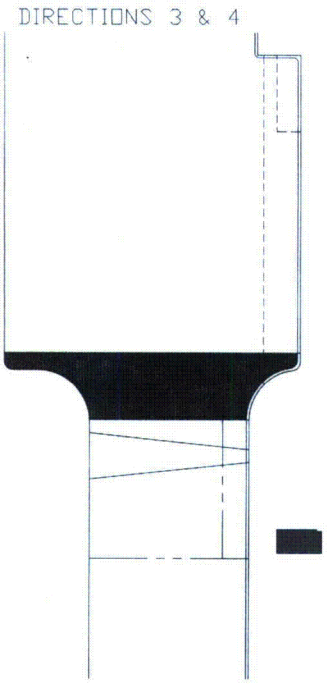
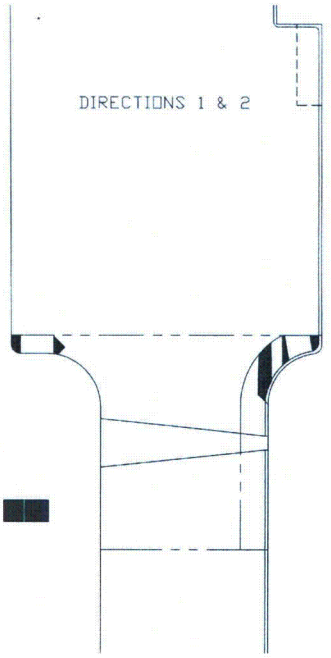


Parallel Scan
Limitation
Missed Volume

Perpendicular Scan
Limitation
Missed Volume

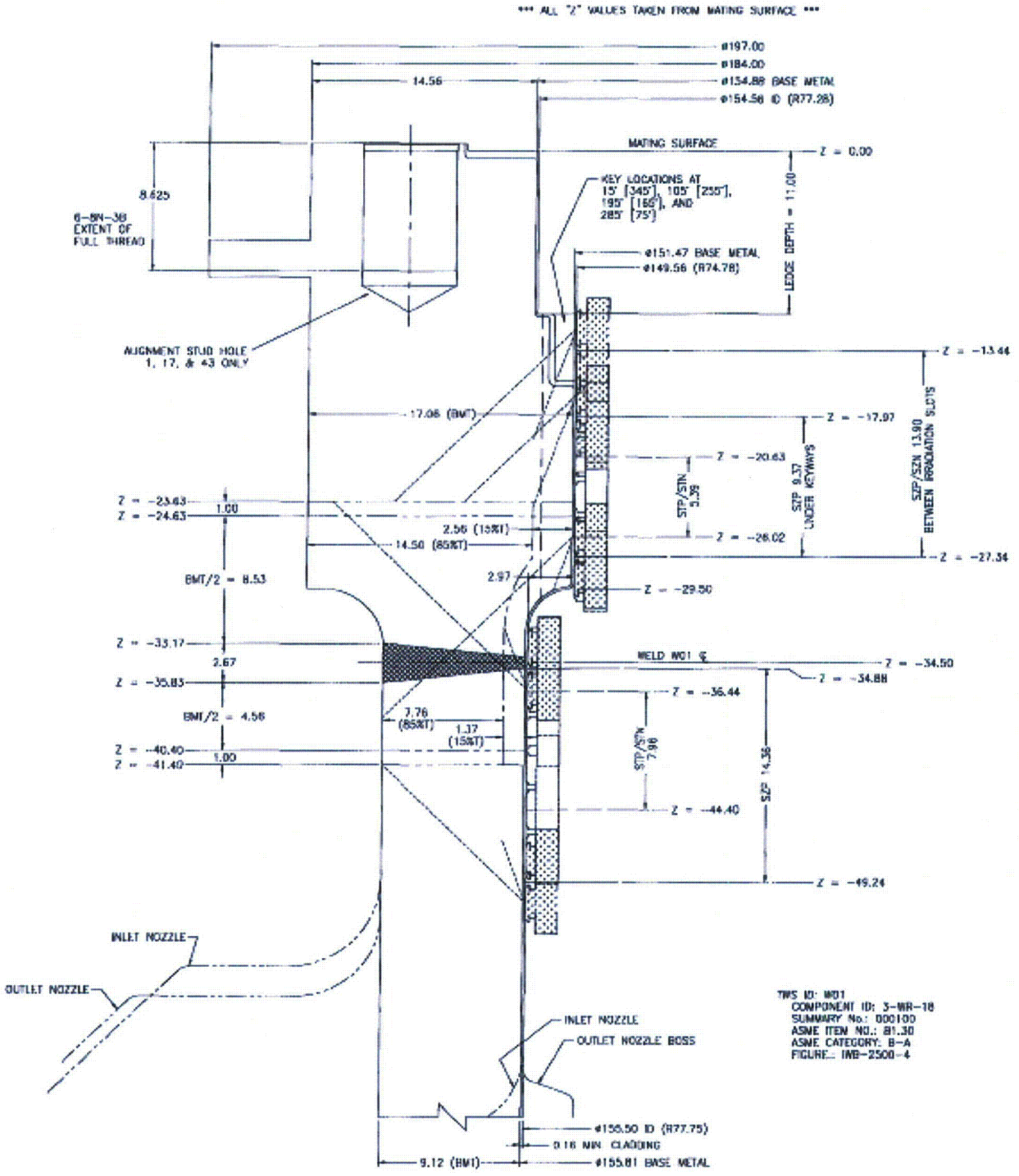


Total Coverage Achieved 75%

Upper Shell to Flange Weld Volume Limitation Illustration (3-WR-18 and 4-WR-18)

Figure 4

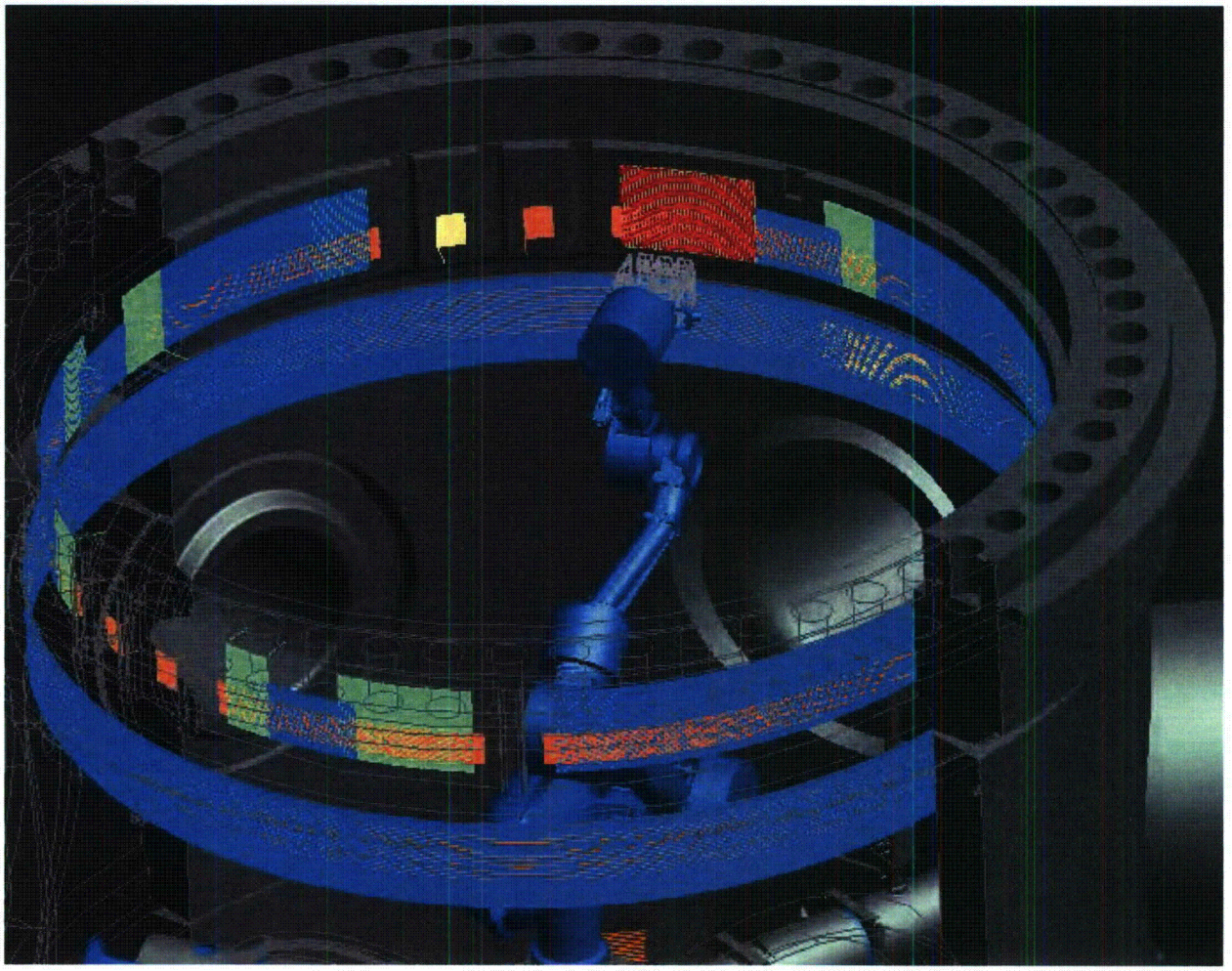
TURKEY POINT UNITS 3 AND 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 15



Upper Shell to Flange Weld (3-WR-18 and 4-WR-18)

Figure 5

TURKEY POINT UNITS 3 AND 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 15



View of TWS robot in vessel upper flange region showing scan limitations caused by the keyways, irradiation slots, and flange inner radius. The keyways and irradiation slots provide a scan limitation above the weld at several locations around the flange. The flange inner radius provides a 360 degree limitation around the vessel. Single sided scan parameters are used near obstructions to improve examination coverage. Coverage obtained on this weld is 75%.

Upper Shell to Flange Weld Volume Limitation Illustration

Figure 6

TURKEY POINT UNITS 3 AND 4
FOURTH INSPECTION INTERVAL
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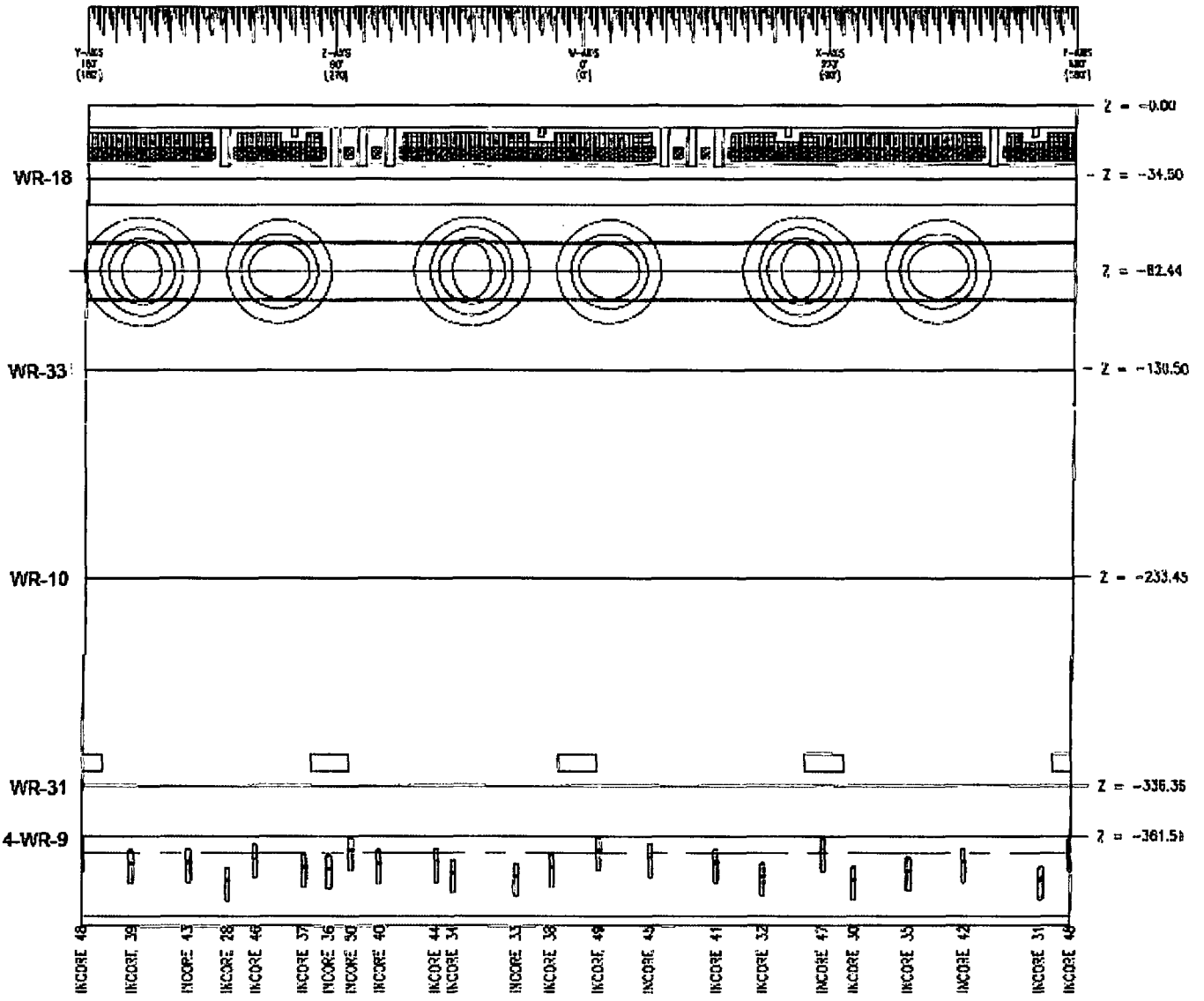

Figure 7
RPV Vessel Rollout

TURKEY POINT UNITS 3 AND 4
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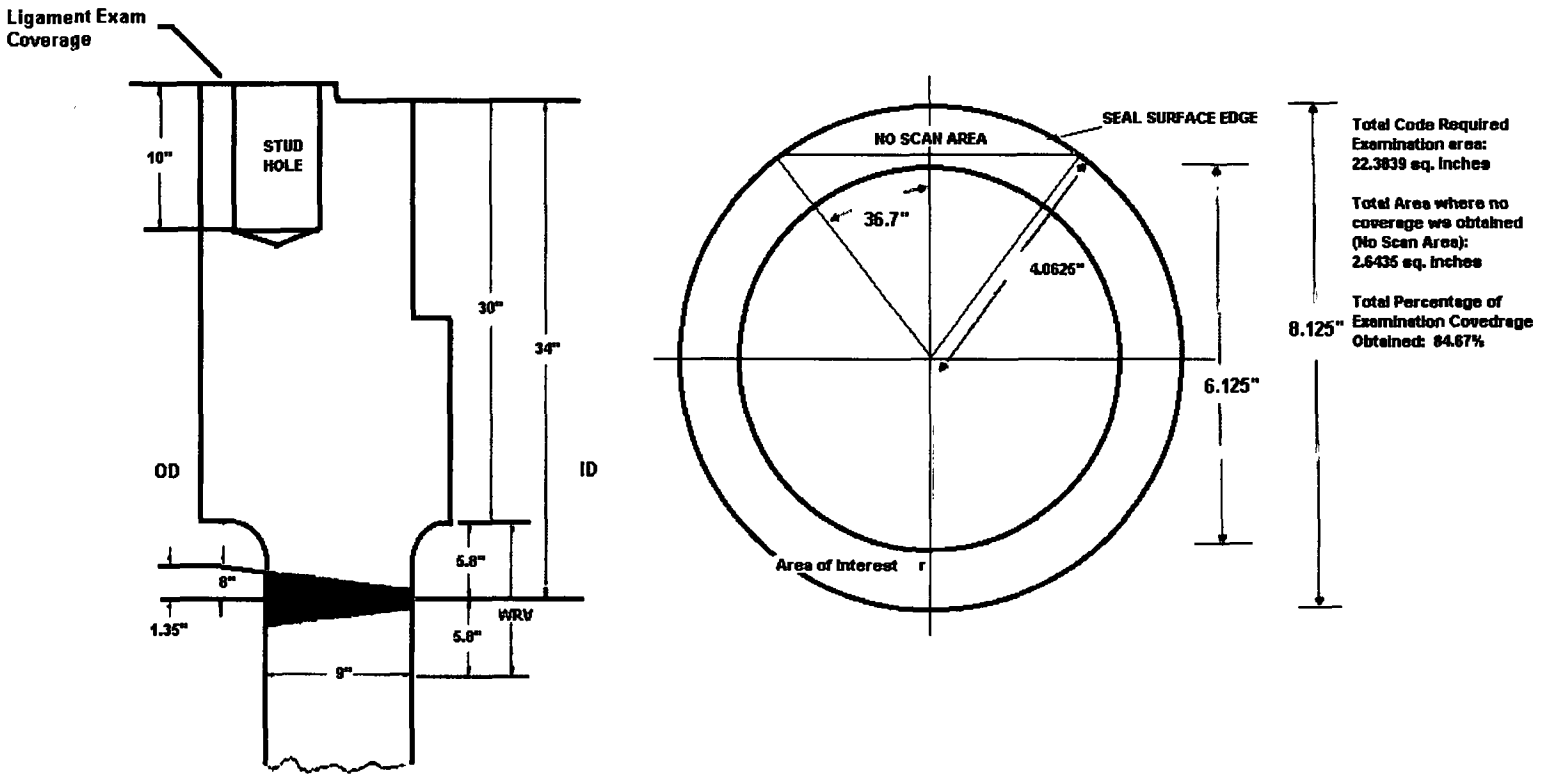

Total Coverage Achieved 84.67%

RPV Flange Ligament Volume Limitation Illustration
Figure 8

L-2015-020

ATTACHMENT 2

TURKEY POINT UNIT 3

RELIEF REQUEST No. 16

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

Relief Request
In Accordance with 10CFR 50.55a(g)(5)iii)

--Inservice Inspection Impracticality--

1. ASME Code Component(s) Affected

Class 1 inner radius in vessels
Class 1 and 2 pressure retaining welds in vessel and piping

2. Applicable Code Edition and Addenda

The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Rules for Inservice Inspection of Nuclear Power Plant Components, Section XI, 1998 Edition with Addenda through 2000 as amended by 10CFR50.55a, is the code of record for the Turkey Point Unit 3, 4th 10-year interval. ASME Section XI, 1998 Edition with Addenda through 2000 as amended by 10CFR50.55a, was utilized for Appendix VIII.

3. Applicable Code Requirement

Exam Cat.	Item No.	Examination Requirements
B-D	B3.120	Essentially 100% volumetric examination of the nozzle inner radius. As mandated by 10CFR50.55a(b)(2)(xxi)(A).
C-A	C1.10 C1.20	Essentially 100% volumetric examination of the weld length.
C-F-1	C5.11	Essentially 100% volumetric and surface examination of circumferential welds $\geq$3/8" nominal wall thickness for piping >4" nominal pipe size.
C-F-1	C5.21	Essentially 100% volumetric and surface examination of circumferential welds >1/5" nominal wall thickness for piping $\geq$2" and $\leq$4" nominal pipe size.
R-A	R1.11	Essentially 100% volumetric examination of the circumferential welds. Risk Informed Selection.

As defined by ASME Code Case N-460, essentially 100% means more than 90% of the examination volume of each weld where reduction in coverage is due to interference by another component or part geometry.

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

4. Impracticality of Compliance

Due to the configuration, it is not possible to meet the examination coverage requirements of the ASME Code, Section XI, 1998 Edition with Addenda through 2000, as clarified by Code Case N-460. Relief is requested in accordance with 10CFR50.55a(g)(5)(iii). These areas were found during the 4th 10-year inservice inspection interval.

When a component has conditions, which limit the examination volume, Florida Power and Light is required to submit the information to the enforcement and regulatory authorities having jurisdiction at the plant site. This Relief Request has been written to address areas where those types of conditions exist and the required amount of coverage was reduced below the minimum acceptable.

When examined, the welds listed within this request did not receive the required code volume coverage due to their configuration and/or the presence of permanent attachments. These scanning limitations prohibit essentially 100% ultrasonic examination coverage of the required examination volume.

The Table included in this Relief Request summarizes the percent of coverage credited and references specific figures that show the extent of coverage.

Relief is requested from the ASME Boiler and Pressure Vessel Code required volume as identified in Figure IWB-2500-7, IWC-2500-1 and IWC-2500-7. Additionally, for welds categorized as R-A in accordance with the Turkey Point Risk Informed (RI) Program (MD7740), the Figure IWB-2500-8 exam volume is increased, when required, to include internal counterbore areas.

5. Burden Caused by Compliance

It is not possible to obtain ultrasonic interrogation of greater than 90% of the required examination volume due to interference caused by configuration and/or permanent attachments. Examinations are performed to the maximum extent possible. The Ultrasonic (UT) techniques for each weld were reviewed to determine if additional coverage could be achieved. For the welds listed in the Table, FPL determined that removal of the obstruction was not possible without significant work, increased radiation exposure, and/or damage to the plant. Additional weld preparation by welding or metal removal is a modification of the examination area requiring significant engineering and construction personnel support.

Radiography is impractical due to the amount of work being performed in the areas on a 24-hour basis. This would result in numerous work-related stoppages and increased exposure due to the shutdown of and startup of other work in the areas. The water must be drained from systems where radiography is performed, which increases the radiation dose rates over a much broader area than the weld being examined. There would be significant burden associated with the performance of weld or area modifications or radiography in order to increase the examination coverage.

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FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

6. Proposed Alternative and Basis for Use

Proposed Alternative

1) Periodic system pressure tests in accordance with ASME Section XI Category B-P, Table IWB-2500-1 and C-H, Table IWC-2500-1.

2) Conduct ultrasonic examinations to the maximum extent possible.

3) Regular walkdowns by operations personnel and system engineers are performed on systems outside containment to check for leakage, piping configuration, and/or damage. During outages, system engineers walkdown systems inside and outside containment. This walkdown is performed to look for system anomalies that could affect plant performance.

Basis

The attached Table provides the percent of coverage credited and references specific figures that illustrate the extent of coverage for each weld. The examination figures of ASME Section XI, 1998 Edition with Addenda through 2000, define the examination volume required. The system, diameter, pipe schedule and material are identified for each item within the Table. The angles, Ultrasonic wave modes (Shear-S or Longitudinal-L) that were employed for examination and impracticality of compliance are listed for each weld. Arrows and lines on the figures illustrate the UT transducer beam direction and extent of the area examined.

10 CFR 50.55a(g)(4) recognizes that throughout the service life of a nuclear power facility, components which are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements set forth in the ASME Code to the extent practical within the limitations of design, geometry and materials of construction of the components.

FPL performed the examinations to the extent possible. There is no plant-specific, NextEra fleet or industry operating experience regarding potential degradation specific to the subject welds included in this relief request. However, isolated occurrences of stress corrosion cracking have occurred in stainless steel materials in the industry. To address the concerns of these isolated cases, periodic walkdowns by plant personnel provide assurance that any isolated degradation would be identified at the onset before a safety concern could develop.

The Class 1 and 2 items identified in the table are located within either the reactor containment building or reactor auxiliary building. Regular walkdowns by operations personnel and system engineers are performed on systems in the reactor auxiliary building to check for leakage, piping configuration, and/or damage. During outages, system engineers perform boric acid walkdowns of all systems inside containment. This walkdown is performed to look for borated system as well as system abnormalities that could affect plant performance. Also, a system pressure test and VT-2 visual examination is performed each refueling outage for Class 1 connections and each period

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

for Class 2 and 3 connections without removal of insulation by examining the accessible and exposed surfaces and joints of the insulation.

Leakage monitoring inside containment at Turkey Point Unit 3 is provided by the reactor cavity (containment) sump inlet flow monitoring system. This system has high level and alert status alarms in the control room. This system has Tech Spec required monitoring (TS 3/4.4.6.2.1(b)) at least once every 12 hours.

All preservice and inservice examinations were performed by personnel certified in accordance with IWA-2300 of 1998 Edition with Addenda of the ASME Section XI Code. UT examinations of the austenitic piping welds utilized equipment, procedures, and personnel qualified in accordance with ASME Section XI, Appendix VIII, Supplement 2, 1998 Edition with Addenda through 2000 and the Performance Demonstration Initiative (PDI) program.

The UT techniques for each weld were reviewed to determine if additional coverage could be achieved. FPL's procedures require the examiner to make an attempt to achieve complete coverage by using alternative techniques such as using a smaller wedge thus reducing the distance from the exit point to the front of the wedge, changing angles or reducing the search unit element size. Any alternative equipment is required to be in compliance with the limits specified in the qualified procedure. Alternate techniques were investigated at the time of discovery.

For piping welds performed in accordance with Appendix VIII, Supplement 2, the coverage credited is limited when access can only be obtained from one side. No coverage is claimed past the centerline in the coverage credited in the Table since access for scanning was not available from that side of the weld and the Performance Demonstration Qualification Summary (PDQS) for the qualified procedure, PDI-UT-2, states that "the austenitic single side qualification documented on this summary demonstrates application of best available technology, but do not meet the requirements of 10CFR 50.55a(b)(2)(xvi)(B)." It should be noted that UT was performed through the weld to obtain the maximum possible Code examination volume and, as shown in the figures, the theoretical beam path extends into the far side for the examinations performed. While the coverage is not included in the Table, the techniques employed for the single side examination are noted in the figures and provided for a best effort examination. The coverage obtained was the maximum practical. Therefore, the UT examinations conducted using the Appendix VIII, Supplement 2, qualified procedure provide reasonable assurance for the detection of flaws on the far side of welds where the ultrasonic beam has been transmitted even though not presently qualified.

The Risk Informed Inservice Inspection (RI-ISI) Program for Class 1 piping welds was submitted (Relief Request 3) and approved (SE dated December 9, 2008 TAC No. MD7740) as an alternative to the requirements of Section XI as for the fourth 10-year interval.

For the Risk Informed (RI) weld 31"-RCS-1301-8, the ASME Section XI 1998 Edition with Addenda through 2000, Figure IWB-2500-8(c) examination volume is ¼" from toe of the weld on each side for the bottom 1/3t. However, the Risk Informed examination

volume is extended to ½" from each toe of the weld and due to the counterbore on the elbow side as shown in Figure 19, the examination volume is extended an additional ½". If a dotted line was drawn vertically ¼" from the elbow weld toe and the ASME Code Section XI 1998 Edition with Addenda through 2000, the examination volume identified in Figure IWB-2500-8 from the elbow side would be essentially 100% coverage achieved. Because of the extended volume past the elbow counterbore, the elbow OD transition and the risk informed extended volume prohibits obtaining essentially 100% coverage as identified in the ASME Section XI 1998 Edition with Addenda through 2000, Figure IWB-2500-8. There are 6 welds in the reactor coolant system selected with similar configurations in the Risk Informed Program. This is the only weld considered limited.

Weld 3"-SI-2303-2312 was installed in 2011 as part of the extended power uprate project and examined. This weld was replaced as part of a valve replacement and not due to weld or base metal degradation. Preservice examinations performed during the replacement process included in-process and final surface examinations, and final radiography (RT) in accordance with the requirements of ASME Section III. The surface and radiographic examinations were not limited. Final RT and surface examinations performed during the installation of the weld revealed no recordable or reportable flaws in the examination zone or adjacent to any UT limitations. The acceptable surface and RT results were obtained prior to the preservice UT examination being performed. Subsequently, the weld was examined in 2014 as part of the population selected for examination in accordance with IWC-2500-1, Examination Category C-F-1. The preservice UT/PT and inservice examination UT/PT examinations did not reveal any recordable or reportable flaws in the examination zone. .

For all welds except 3"-RC-1301-1, 31"-RCS-1302-8, 3-RHE-A1, 3-RHE-A2, and 3"-SI-2403-36 listed in Table 1, surface examinations were performed and not limited. Welds 3"-RC-1301-1 and 31"-RCS-1302-8 did not require a surface exam per FPL's Risk Informed Program. Welds 3-RHE-A1 and 3-RHE-A2 are Class 2 Category C-A welds, which do not require surface examinations by ASME Code Category C-A, Item No. C1.20. And the surface exam of weld 3"-SI-2403-36 achieved 97.5% of the code required surface as shown in IWC-2500-8 due to a support saddle weld at the toe of weld. .

In all cases, 100% of the accessible Code required surface area was examined. All welds had a surface examination (liquid penetrant) and radiographic (RT) performed and were acceptable for service in accordance with the requirements of ASA B31.1, 1955 Edition.

The surface and volumetric examinations of all the items listed did not reveal any recordable or reportable flaws in the examination zone or adjacent to any volumetric limitations.

The extent of examination volumes achieved via surface and/or volumetric examinations, combined with the system pressure tests and system walk downs, provide assurance of an acceptable level of quality and safety.

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7. Duration of Proposed Alternative

This relief request is applicable to the Turkey Point unit 3 Fourth Inservice Inspection Interval which began February 22, 2004 and ended February 21, 2014.

8. References

10CFR50.55a

ASME Section XI, "Rules For Inservice Inspection of Nuclear Power Plant Components," 1998 Edition with Addenda through 2000

ASME Section XI, Division 1, Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1"

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System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Applicable Code Requirement and Coverage Credit	Examination Angle and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Pressurizer Spray Nozzle Inner Radius	Pressurizer Spray Nozzle SP-03-1-IR Carbon Steel	2010	Exam Category B-D Item No. B3.120 Fig. IWB-2500-7(d) 82%	60°S	1	Inservice examination limited due to Raised Letters in required scanning area No Recordable Indications	Surface examination is not required by Code.
Residual Heat Exchanger Head to Shell	Residual Heat Removal 3-RHE-A1 Stainless Steel	2010	Exam Category C-A Item No. C1.20 Fig. IWC-2500-1 35%	45°S 60°L 45°L	2	Inservice examination limited due to support proximity to weld on head side and reinforcement plates and welded attachments on the shell side. No Recordable Indications	Surface examination is not required by Code.
Residual Heat Exchanger Shell to Flange	Residual Heat Removal 3-RHE-A2 Stainless Steel	2010	Exam Category C-A Item No. C1.10 Fig. IWC-2500-1 40%	45°S 60°L 45°L	3	Inservice examination limited due to flange configuration. Shell side is limited due to nozzle reinforcements and welded attachments. No Recordable Indications	Surface examination is not required by Code.
Flange to Elbow	Safety Injection 3"-SI-2301-1 (3"-80) Stainless Steel	2014	Exam Category C-F-1 Item No. C5.21 Fig. IWC-2500-7(a) 45.4%	45°S 60°S 70°S	4	Inservice examination limited to single side access due to flange configuration. Elbow limited on intrados due to curvature which limits contact. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.

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System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Applicable Code Requirement and Coverage Credit	Examination Angle and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Pipe to Valve	Safety Injection 3"-SI-2301-4 (3"-80) Stainless Steel	2014	Exam Category C-F-1 Item No. C5.21 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	5	Inservice examination limited to single side access due to valve configuration. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Valve to Pipe	Safety Injection 3"-SI-2303-2312 (3"-80) Stainless Steel	2011 2014	Exam Category C-F-1 Item No. C5.21 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	6	Preservice/Inservice examination limited to single side access due to valve configuration. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Valve to Elbow	Safety Injection 3"-SI-2303-24 (3"-80) Stainless Steel	2014	Exam Category C-F-1 Item No. C5.21 Fig. IWC-2500-7(a) 45.4%	45°S 60°S 70°S Wave	7	Inservice examination limited to single side access due to valve configuration. Elbow limited on intrados due to curvature which limits contact. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Pipe to Valve	Safety Injection 4"-SI-2303-49 (4"-80) Stainless Steel	2014	Exam Category C-F-1 Item No. C5.21 Fig. IWC-2500-7(a) 47.3%	45°S 60°S 70°S	8	Inservice examination limited to single side access due to valve configuration. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.

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System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Applicable Code Requirement and Coverage Credit	Examination Angle and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Pipe to Valve	Safety Injection 8"-SI-2302-6 (8"-120) Stainless Steel	2009	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°L	9	Inservice examination limited to single side access due to valve configuration. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Pipe to Tee	Safety Injection 8"-SI-2309-22 (8"-120) Stainless Steel	2006	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 70% Achieved 82%	45°S 60°S 70°S 45°L 70°L	10	Inservice examination limited to due to intrados of tee. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Tee to Pipe	Safety Injection 8"-SI-2309-23 (8"-120) Stainless Steel	2006	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 70% Achieved 82%	45°S 60°S 70°S 45°L 70°L	11	Inservice examination limited to due to intrados of tee. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Pipe to Valve	Safety Injection 8"-SI-2309-24 (8"-120) Stainless Steel	2006	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 70% Achieved 50%	45°S 60°S 70°S 45°L 60°I 70°L	12	Inservice examination limited to single side access due to valve configuration. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.

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System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Applicable Code Requirement and Coverage Credit	Examination Angle and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Elbow to Valve	Safety Injection 10"-SI-2304-2 (10"-40) Stainless Steel	2009	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	13	Inservice examination limited to single side access due to valve configuration. Examination elbow side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Valve to Elbow	Residual Heat Removal 14"-RHR-2301-1 (14"-40) Stainless Steel	2004	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	14	Inservice examination limited to single side access due to valve configuration. Examination elbow side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Valve to Pipe	Residual Heat Removal 14"-RHR-2301-18 (14"-40) Stainless Steel	2007	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	15	Inservice examination limited to single side access due to valve configuration. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Pipe to Valve	Residual Heat Removal 14"-RHR-2305-3 (14"-40) Stainless Steel	2007	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	16	Inservice examination limited to single side access due to valve configuration. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.

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System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Applicable Code Requirement and Coverage Credit	Examination Angle and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Pipe to Valve	Residual Heat Removal 14"-RHR-2305-11 (14"-40) Stainless Steel	2007	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	17	Inservice examination limited to single side access due to valve configuration. Examination pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Reducer to Valve	Reactor Coolant 3"-RC-1305-1 (3"-120) Stainless Steel	2010	Exam Category R-A Item No. R1.11 Fig. IWB-2500-8(b) 50%	45°S 60°S 70°S	18	Inservice examination limited to single side access due to valve configuration. Examination reducer side complete. No Recordable Indications	Risk-Informed. Surface examination is not required.
Elbow to Pipe	Reactor Coolant 31"-RCS-1302-8 Cast Material Stainless Steel	2004	Exam Category R-A Item No. R1.11 Fig. IWB-2500-8(c) 78.75%	Cast 45°L Stainless 45S 60S 45L	19	Inservice examination limited due to elbow OD geometry. Examination pipe side complete. No Recordable Indications	Risk-Informed. Surface examination is not required.

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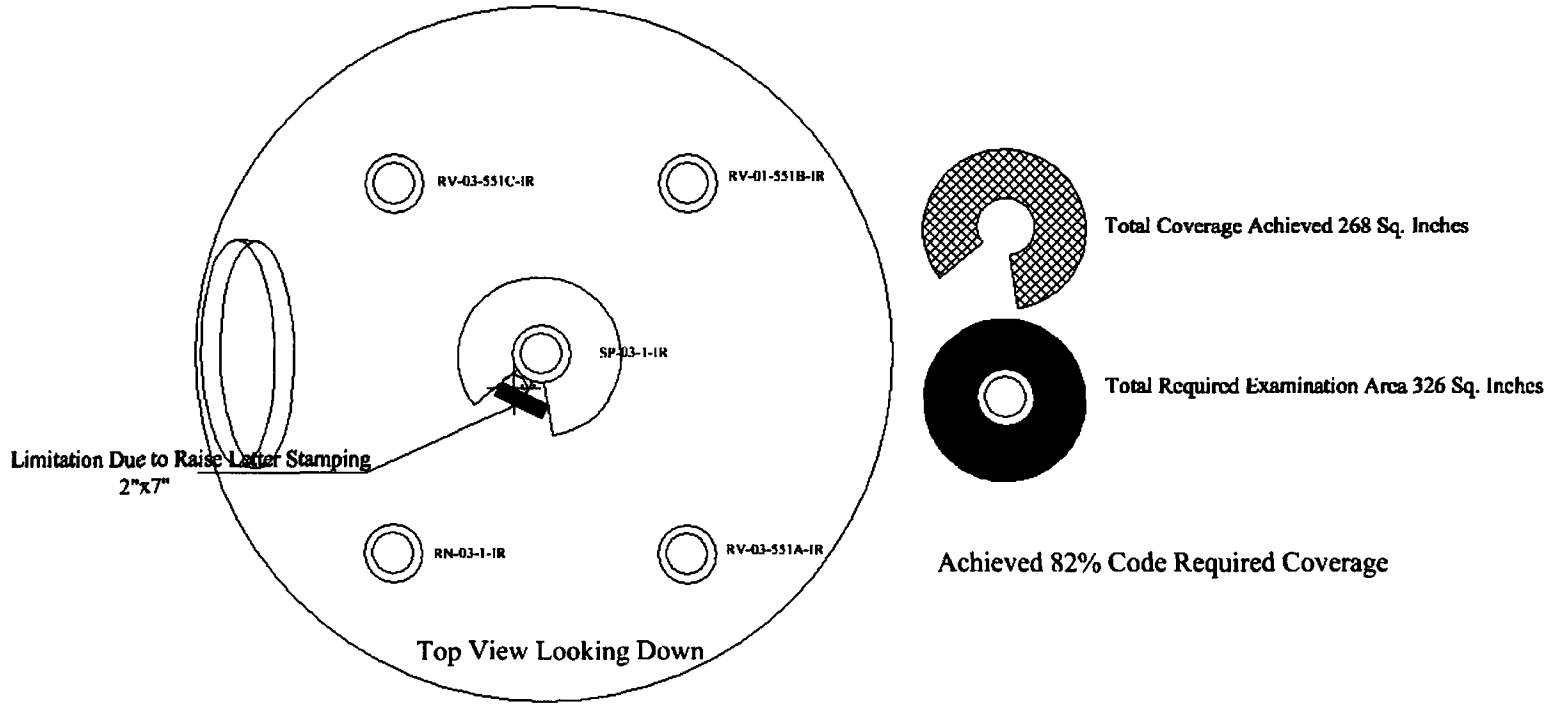
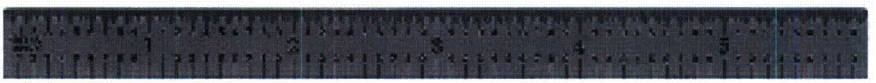
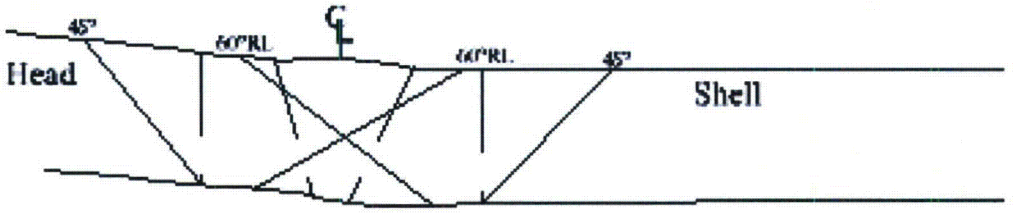


SP-03-1-IR
Figure 1

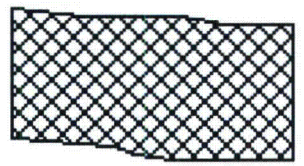
TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



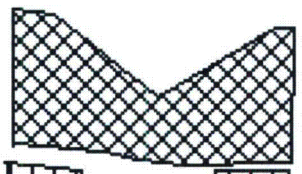
1.0" .90" 1.1" .96" .95" .95"



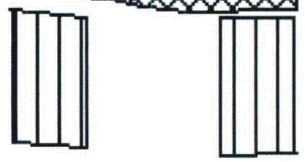
Examination Limted on Shell side due to Nozzles and Supports Total Length 81"
Total Weld Length 132"



Required Exam Volume - 1.88 Sq. Inches



Axial Examination Coverage Achieved 1.44 Sq. Inches
(29%)

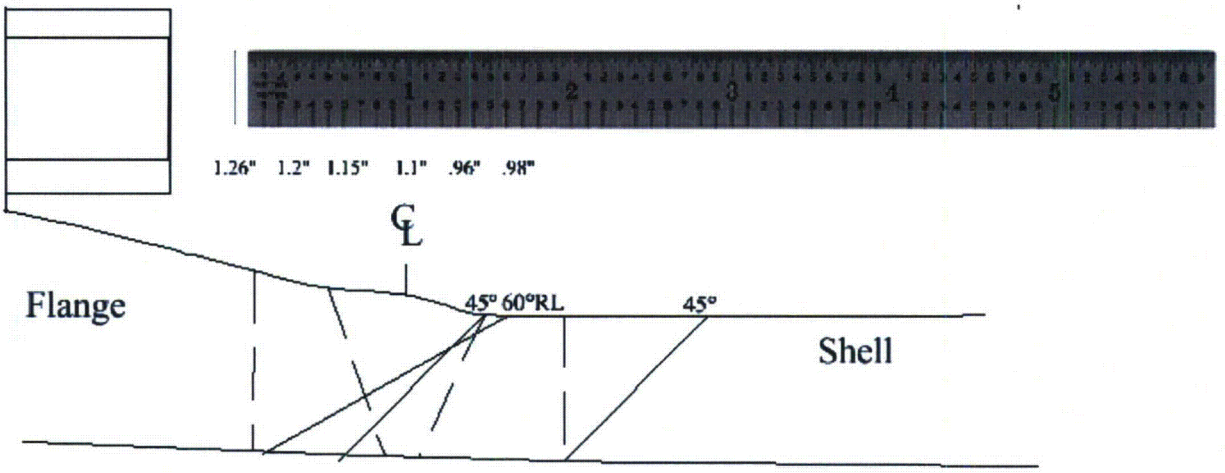


Circ. Examination Coverage Achieved 1.00 Sq. Inches
(42%)

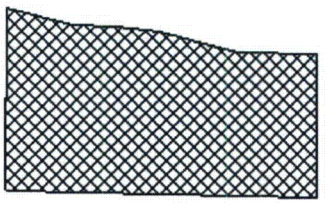
Total Examination Coverage Achieved 35%

3-RHE-A1
Figure 2

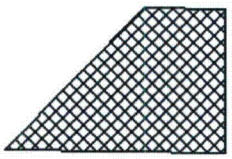
TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



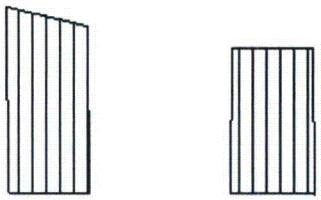
Examination limted due to Nozzles and Supports Total Length 29"
Total Weld Length 132"



Required Exam Volume - 2.13 Sq. Inches



Axial Examination Coverage Achieved .87 Sq. Inches
(31%)



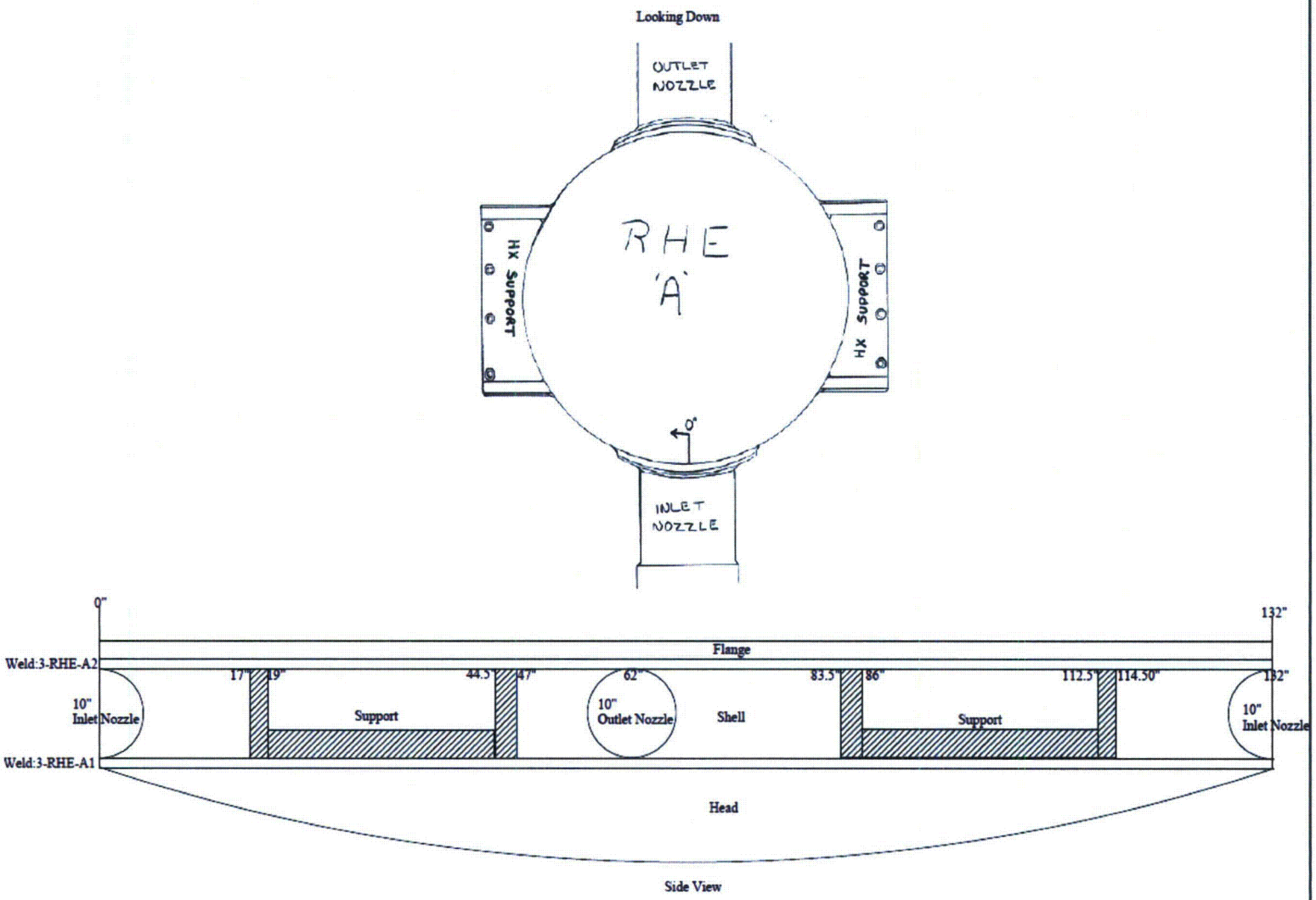
Circ. Examination Coverage Achieved 1.34 Sq. Inches
(50%)

3-RHE-A2

Total Examination Coverage Achieved 40%

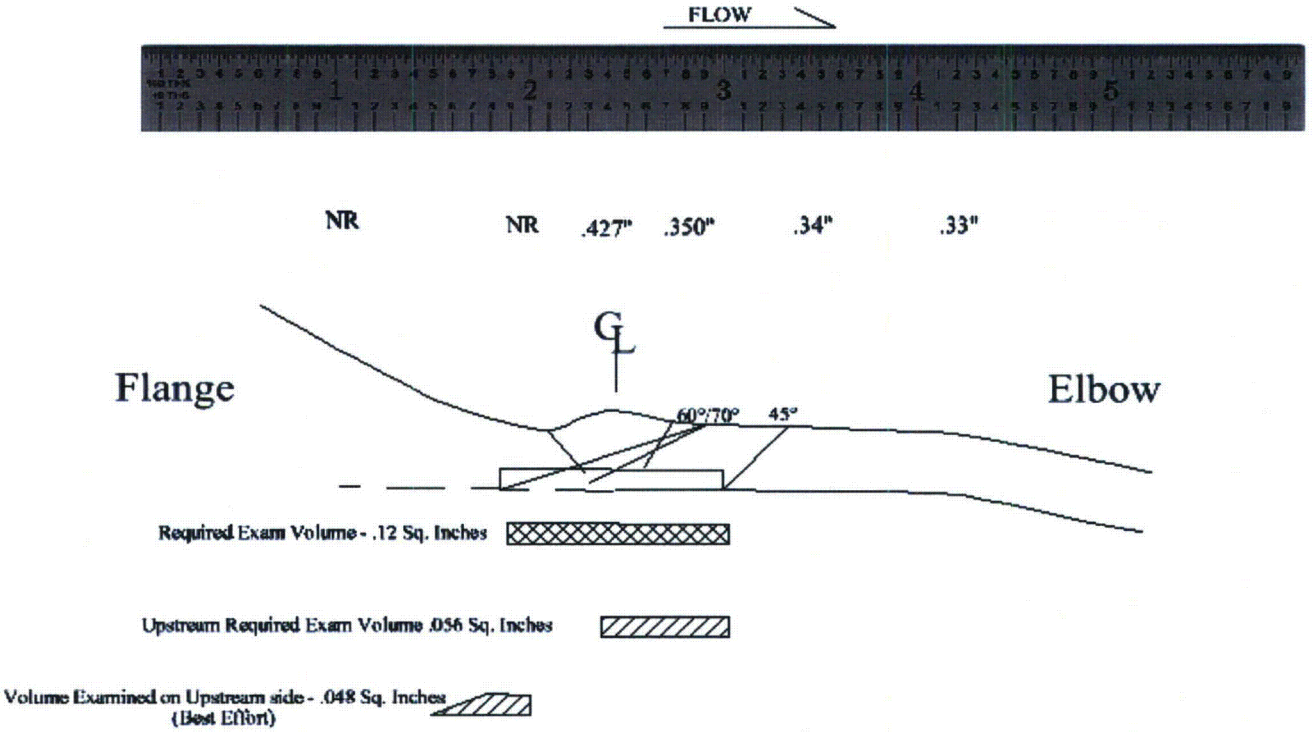
3-RHE-A2
Figure 3

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



4-RHE-A2 & 4-RHE-A1
Figure 2 & 3

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



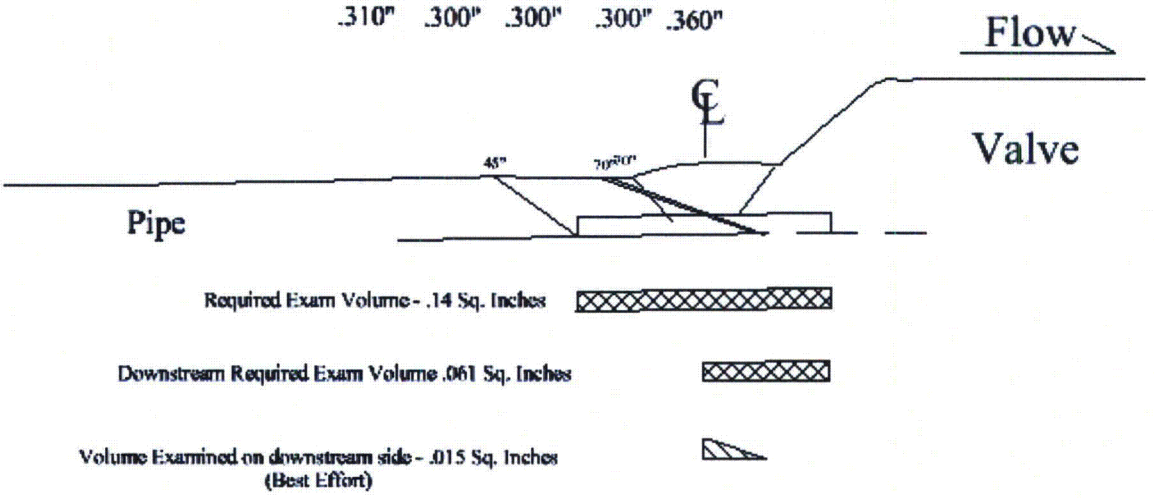
Examination Volume Dimensions: Length 11" x Width 1.15" x Height .11"				
Weld Thickness= .427" Weld Length= 9" Weld Width= .68"				
Coverage Summary- Weld # 3"-SI-2301-1				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	**Upstream-Axial**	**Upstream- Circ.**	**Downstream Axial**	**Downstream Circ.**
45/60	0%	0%	81.8%	100%
70	69% (best effort)			
			Code Coverage Total	**45.4%**
		Best Effort Coverage (Max 25%) Total		**17.35%**

Notes:

1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

3"-SI-2301-1
Figure 4

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

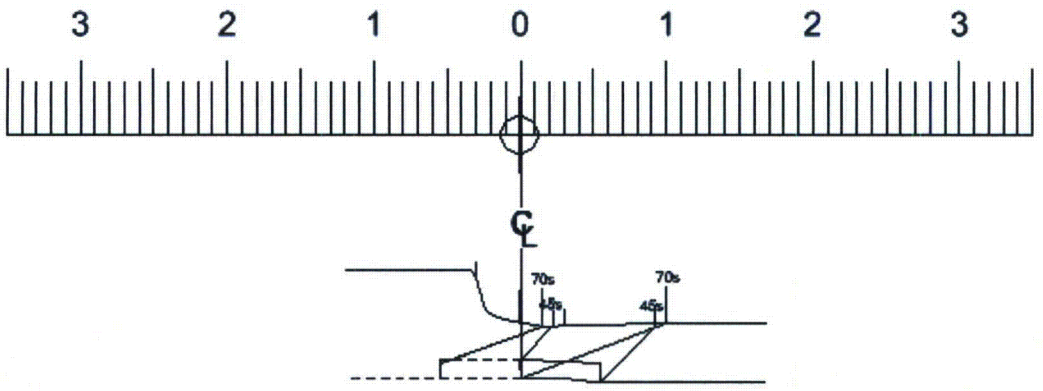


Examination Volume Dimensions: Length 11" x Width 1.20" x Height .10" Weld Thickness= .360" Weld Length= 11" Weld Width= .70"				
Coverage Summary- Weld # 3"-SI-2301-4				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60/70	100%	100%	0%	0%
70			24.5(best effort)	
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		6.14%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

3"-SI-2301-4
Figure 5

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



Single-sided exam due to pipe-to-valve configuration. 2.25 MHz 70° was used upstream to obtain best-effort coverage for the downstream side of the weld.

45° US Axial = 0.068 in² = 0.748 in²
45° DS Axial = No Access
45° US Circ = 0.068 in² = 0.748 in²
45° DS Circ = No Access
70° DS Axial = Unknown volume due to valve configuration.

US Exam Area = 0.068 in² = 0.748 in²
DS Exam Area = Unknown volume due to valve configuration.

Valve MOV-3-869 Flow Tee

Examination Volume Dimensions: Length 11.00" x Width 1.10" x Height 0.131"
Weld Thickness = 0.392" Weld Length = 11.00" Weld Width = 0.60"

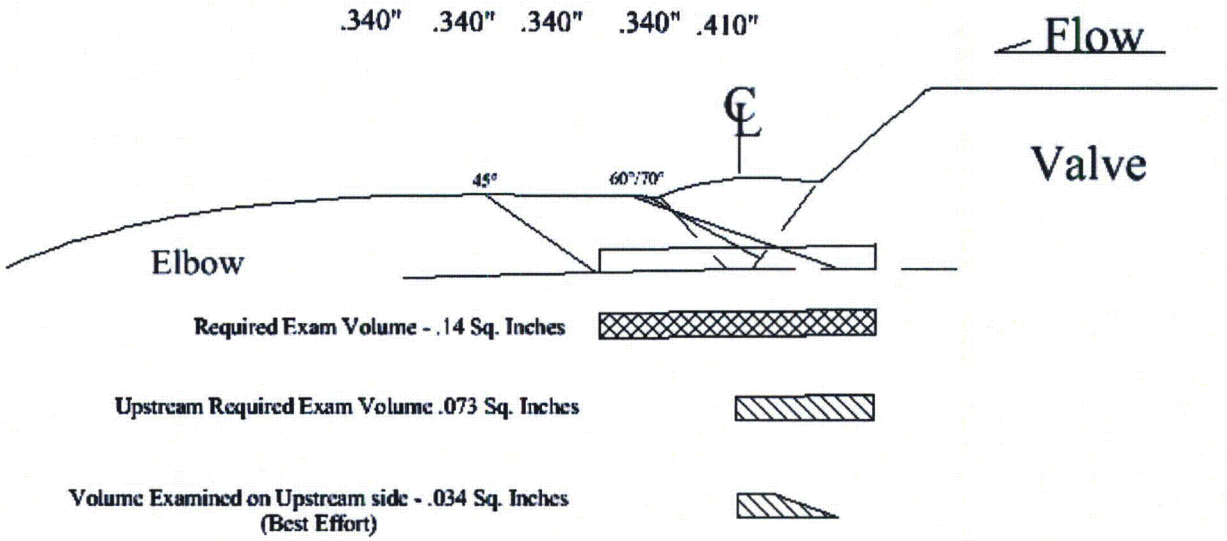
Coverage Summary - Weld # 3"-SI-2303-2312

	Required Scans - Each has weighing factor of 100% for complete coverage			
Angle	**Upstream - Axial**	**Upstream - Circ.**	**Downstream - Axial**	**Downstream - Circ**
45	100%	100%	0%	0%
70	N/A	N/A	N/A	N/A
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		N/A

Notes:
1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure.**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage.**

3"-SI-2303-2312
Figure 6

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

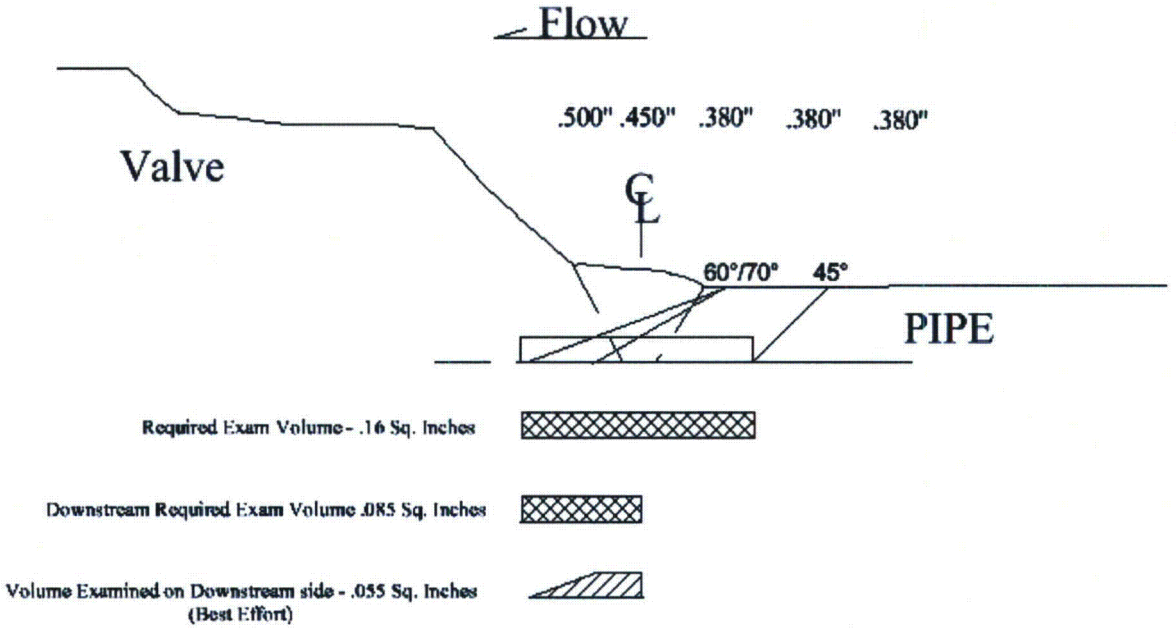


Examination Volume Dimensions: Length 11" x Width 1.20" x Height .11" Weld Thickness= .410" Weld Length= 9" Weld Width= .70"				
Coverage Summary- Weld # 3"-SI-2303-24				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60	0%	0%	81.8%	100%
70	38.1(best effort)			
			Code Coverage Total	45.4%
		Best Effort Coverage (Max 25%) Total		9.5%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

3"-SI-2303-24
Figure 7

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

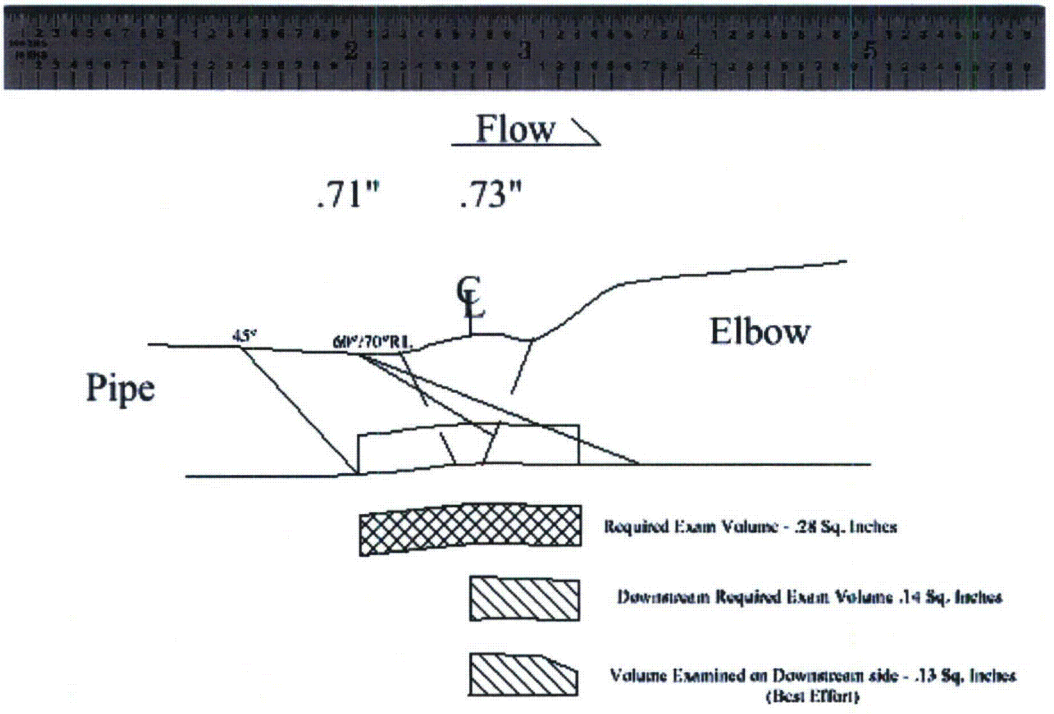


Examination Volume Dimensions: Length 14.14" x Width 1.15" x Height .11" Weld Thickness= .450" Weld Length= 13.39" Weld Width= .65"				
Coverage Summary- Weld # 4"-SI-2303-49				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60/70	94.6%	94.6	0%	0%
70			61.5(best effort)	
			Code Coverage Total	47.3%
		Best Effort Coverage (Max 25%) Total		15.3%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

4"-SI-2303-49
Figure 8

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

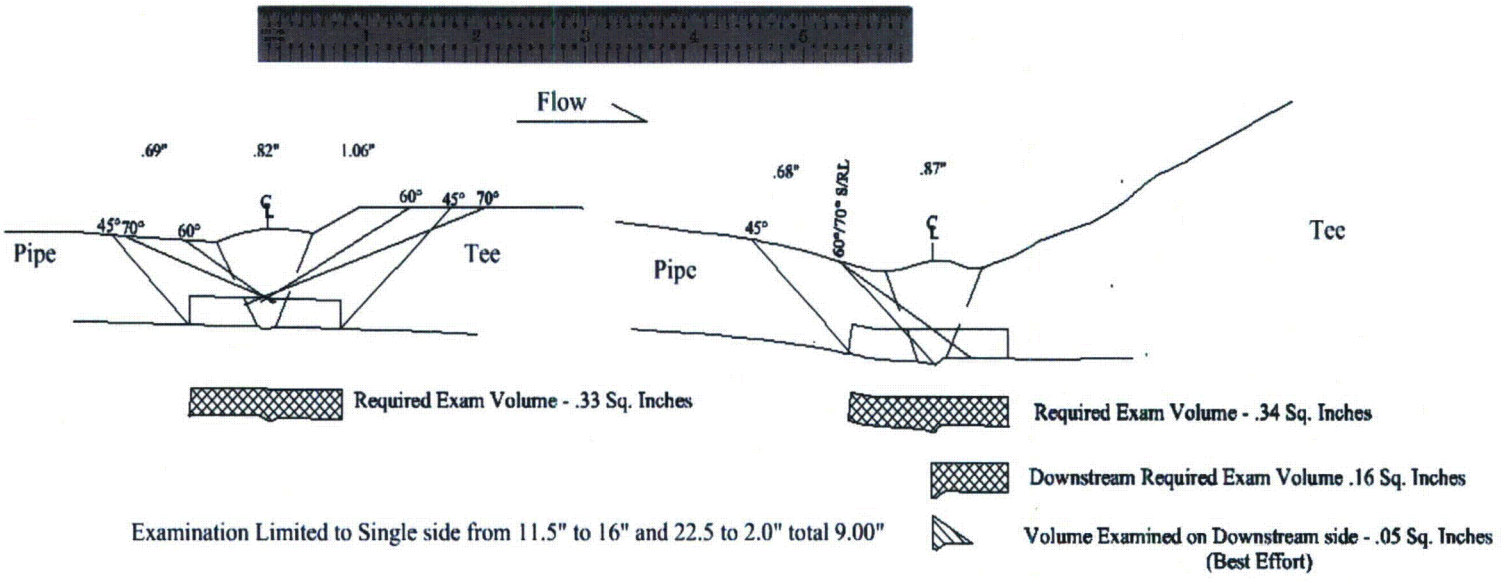


Examination Volume Dimensions: Length 25.4" x Width 1.23" x Height .23" Weld Thickness= .73" Weld Length= 25.4" Weld Width= .73"				
Coverage Summary- Weld # 8"-SI-2302-6				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60	100%	100%	0%	0%
70RL			92% (best effort)	
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		23.2%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

8"-SI-2302-6
Figure 9

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



Examination Volume Dimensions: Length .25" x Width 1.39" x Height .23"
Weld Thickness= .82" Weld Length= 25" Weld Width= .89"

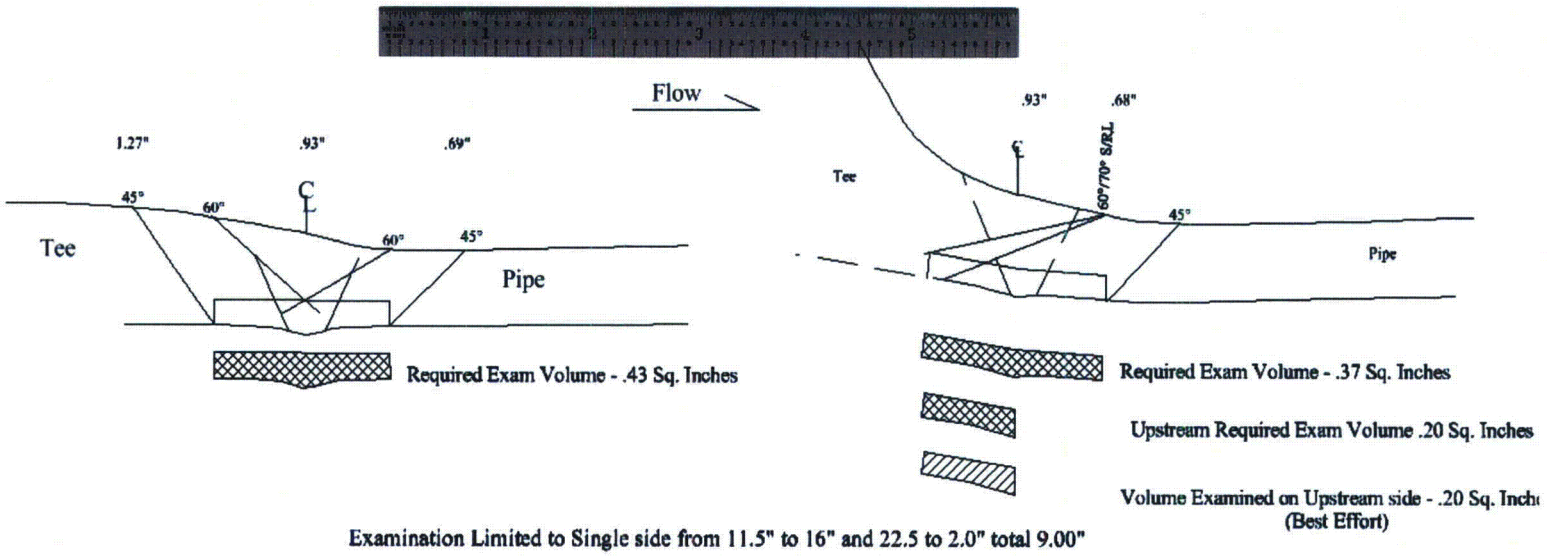
Coverage Summary- Weld # 8"-RHR-2309-22

	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60/70	100%	100%	64%	64%
70/60 RL			31% (best effort)	
			Code Coverage Total	82%
		Best Effort Coverage (Max 25%) Total		7.81%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

8"-SI-2309-22
Figure 10

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



Examination Limited to Single side from 11.5" to 16" and 22.5 to 2.0" total 9.00"

Examination Volume Dimensions: Length .25" x Width 1.63" x Height .23"
Weld Thickness= .99" Weld Length= 25" Weld Width= 1.13"

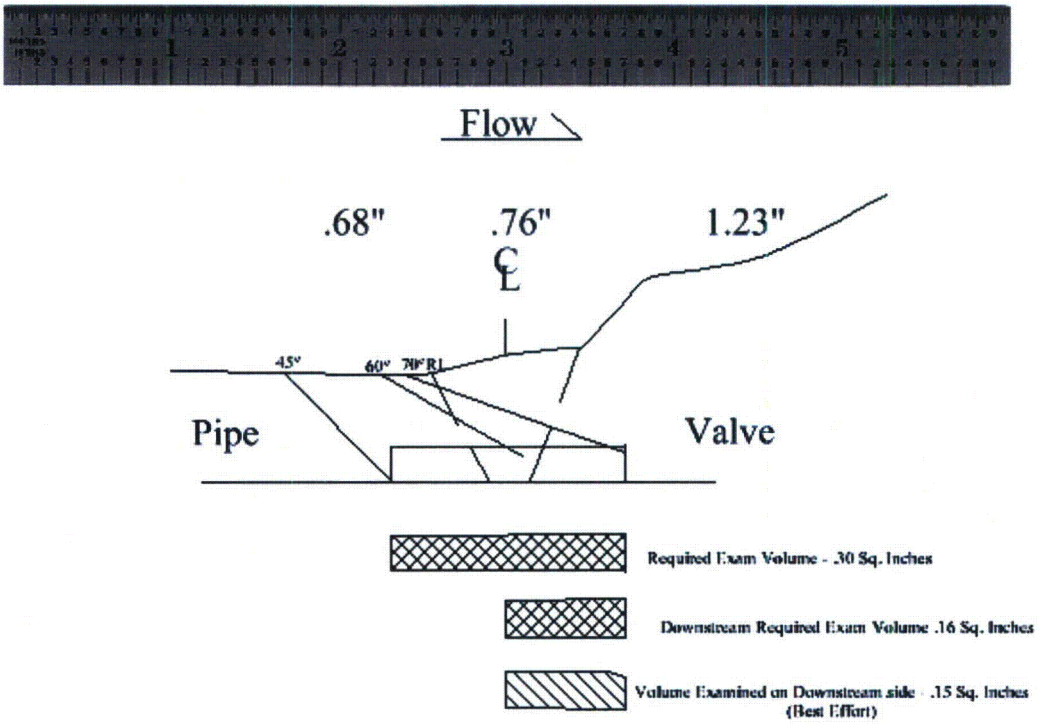
Coverage Summary- Weld # 8"-RHR-2309-23

	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60/70	100%	100%	64%	64%
70/60 RL			50% (best effort)	
			Code Coverage Total	82%
		Best Effort Coverage (Max 25%) Total		12.5%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

8"-SI-2309-23
Figure 11

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



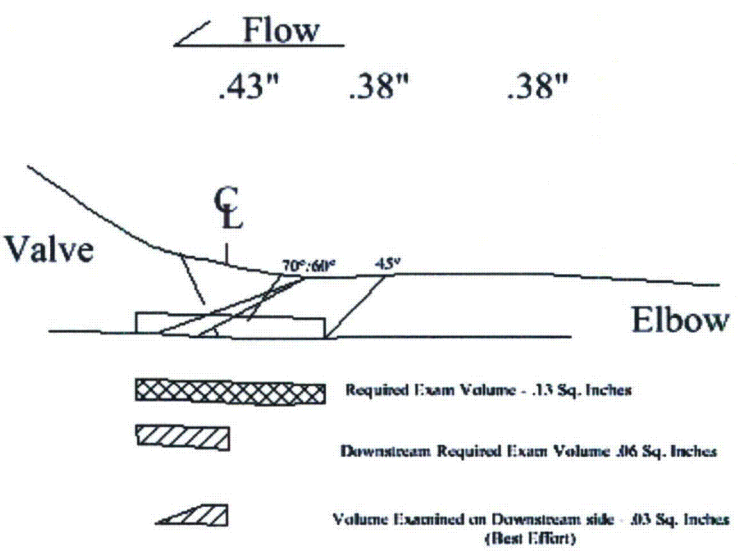
Examination Volume Dimensions: Length 25.4" x Width 1.37" x Height .12" Weld Thickness= .76" Weld Length= 25.4" Weld Width= .87"				
Coverage Summary- Weld # 8"-SI-2309-24				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream-Circ.	Downstream Axial	Downstream Circ.
45/60	100%	100%	0%	0%
70RL			93% (best effort)	
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		23.6%

Notes:

1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

8"-SI-2309-24
Figure 12

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



Examination Volume Dimensions: Length 31.0" x Width 1.10" x Height .12"
Weld Thickness= .43" Weld Length= 31.0" Weld Width= .61"

Coverage Summary- Weld # 10"-SI-2304-2

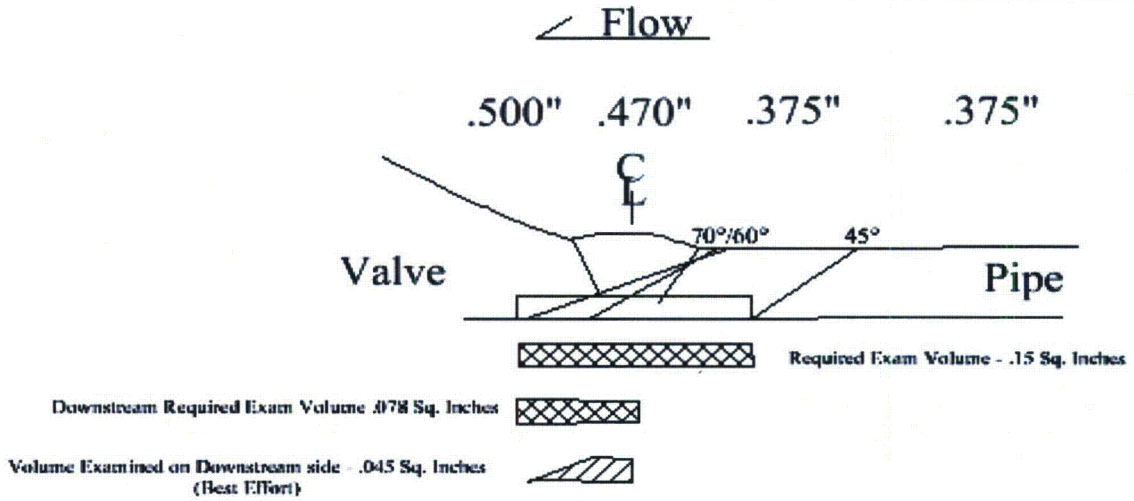
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60	100%	100%	0%	0%
70			50% (best effort)	
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		12.5%

Notes:

1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

10"-SI-2304-2
Figure 13

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



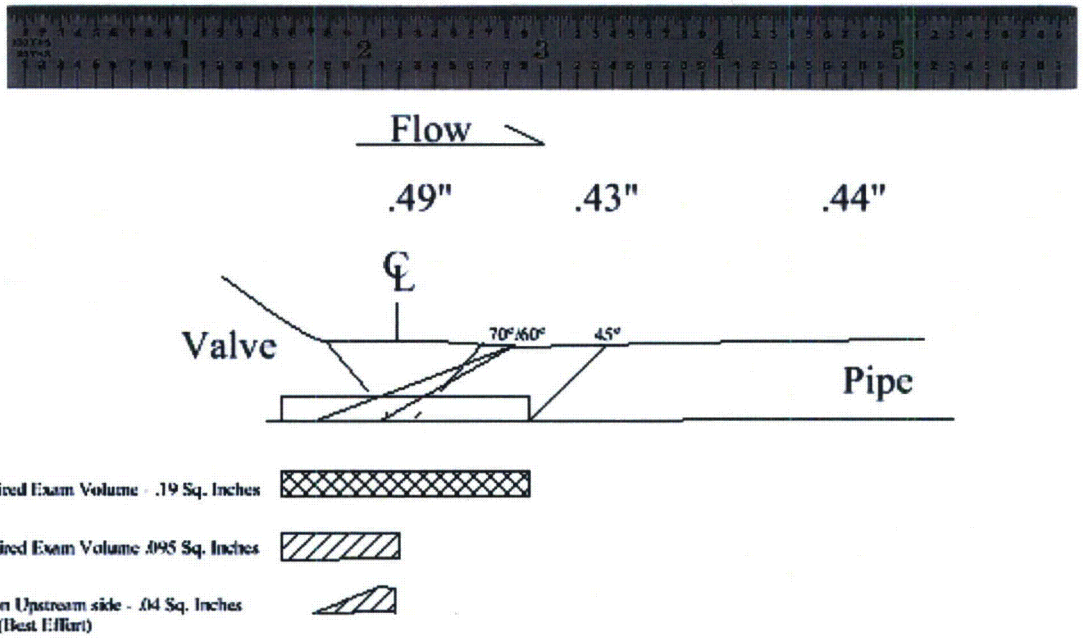
Examination Volume Dimensions: Length 43.9" x Width 1.17" x Height .12"				
Weld Thickness= .470" Weld Length= 43.9" Weld Width= .67"				
Coverage Summary- Weld # 14"-RHR-2301-1				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	**Upstream-Axial**	**Upstream- Circ.**	**Downstream Axial**	**Downstream Circ.**
45/60	100%	100%	0%	0%
70			62.5% (best effort)	
			Code Coverage Total	**50%**
		Best Effort Coverage (Max 25%) Total		**15.6%**

Notes:

1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

14"-RHR-2301-1
Figure 14

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



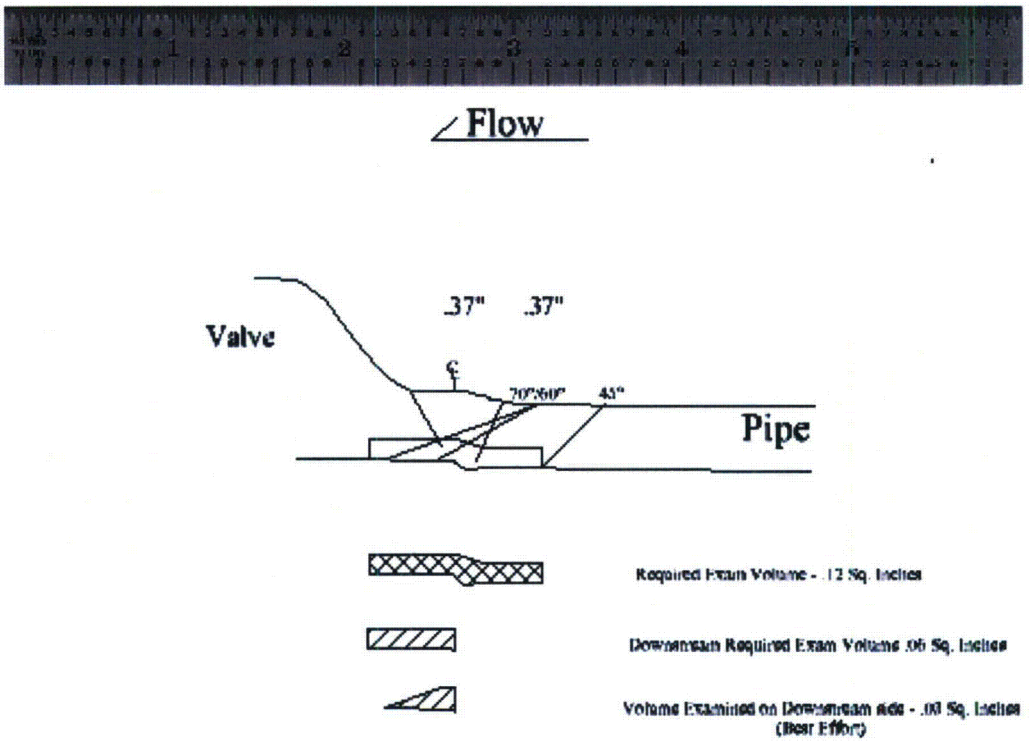
Examination Volume Dimensions: Length 43.9" x Width 1.40" x Height .14"				
Weld Thickness= .49" Weld Length= 43.9" Weld Width= .90"				
Coverage Summary- Weld # 14"-RHR-2301-18				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	**Upstream-Axial**	**Upstream- Circ.**	**Downstream Axial**	**Downstream Circ.**
45/60	0%	0%	100%	100%
70	42% (best effort)			
			Code Coverage Total	**50%**
		Best Effort Coverage (Max 25%) Total		**10.5%**

Notes:

1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

14"-RHR-2301-18
Figure 15

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

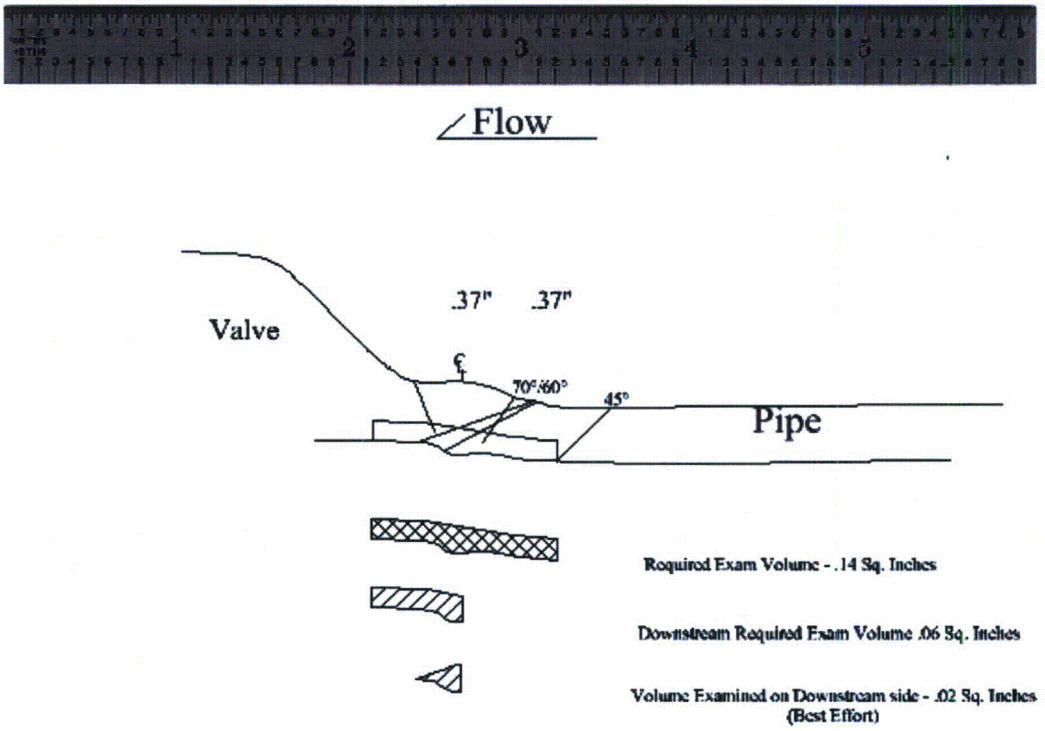


Examination Volume Dimensions: Length 43.9" x Width 1.10" x Height .12" Weld Thickness= .37" Weld Length= 43.9" Weld Width= .60"				
Coverage Summary- Weld # 14"-RHR-2305-3				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream-Circ.	Downstream Axial	Downstream Circ.
45/60	100%	100%	0%	0%
70RL			50% (best effort)	
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		12.5%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

14"-RHR-2305-3
Figure 18

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



Examination Volume Dimensions: Length 43.9" x Width 1.10" x Height .12" **Weld Thickness= .37" Weld Length= 43.9" Weld Width= .60"**				
Coverage Summary- Weld # 14"-RHR-2305-11				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	**Upstream-Axial**	**Upstream- Circ.**	**Downstream Axial**	**Downstream Circ.**
45/60	100%	100%	0%	0%
70			33.3% (best effort)	
			Code Coverage Total	**50%**
		Best Effort Coverage (Max 25%) Total		**8.32%**

Notes:

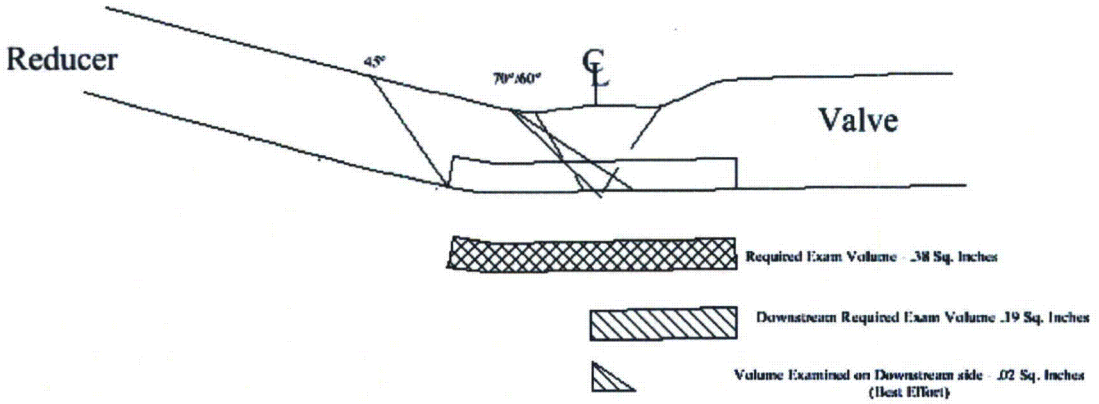
1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

14"-RHR-2305-11
Figure 17

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0

Flow ↘

.63" .62" .57" .75"

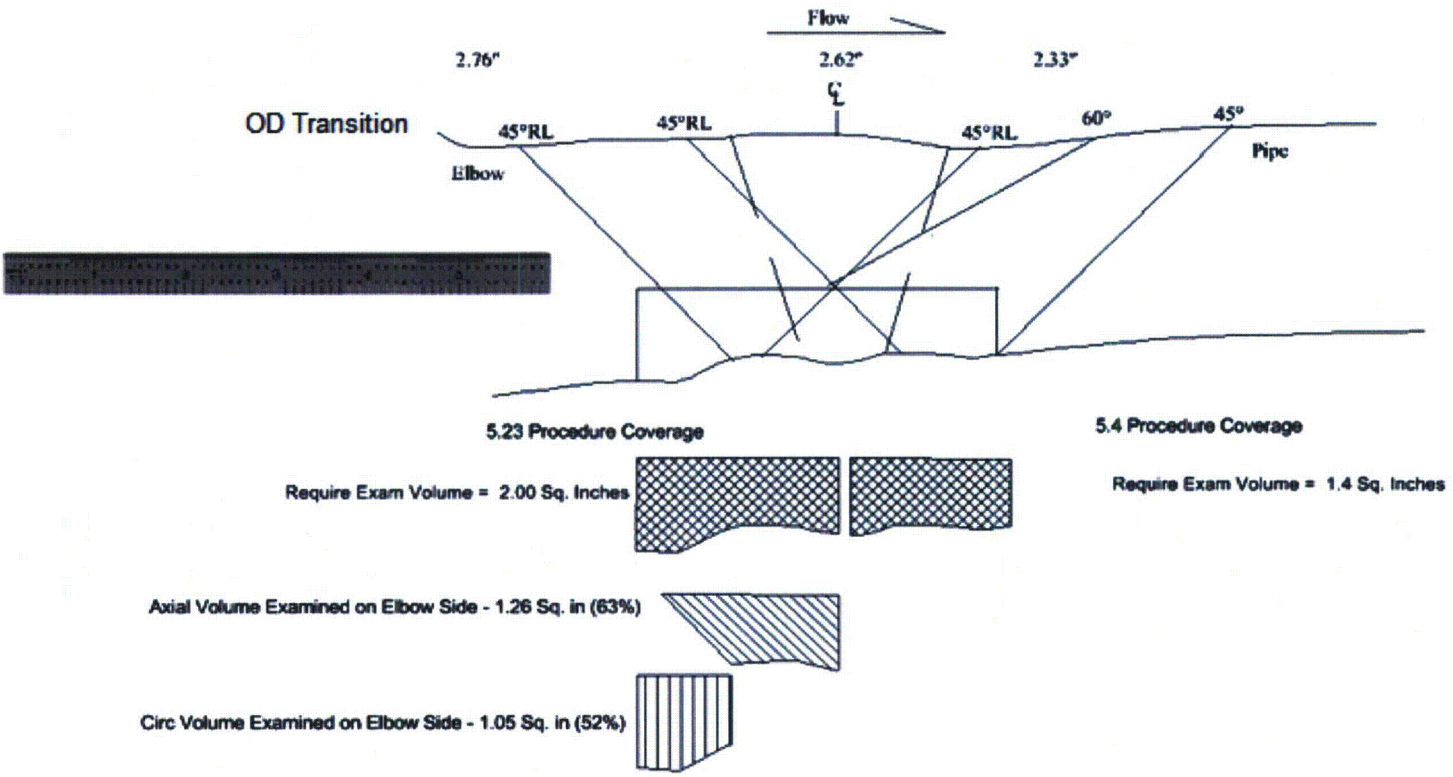


Examination Volume Dimensions: Length 11" x Width 1.35" x Height .12" Weld Thickness= .57" Weld Length= 11" Weld Width= .85"				
Coverage Summary- Weld # 3"-RC-1305-1				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60	100%	100%	0%	0%
70RL			13% (best effort)	
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		3.2%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

3"-RC-1305-1
Figure 18

TURKEY POINT UNIT 3
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 16, REVISION 0



Examination Volume Dimensions: Length 97.3" x Width 3.95" x Height .91" Weld Thickness = 2.62" Weld length = 97.3" Weld Width = 2.37"				
Coverage Summary – 31"-RCS-1402-6				
	Required Scans – each has a weighing factor of 100% for complete coverage			
Angle	Upstream - Axial	Upstream - Circ	Downstream - Axial	Downstream - Circ
45S/60S/45RL	0%	0%	100%	100%
45RL	63%	52%	0%	0%
			Code Coverage Total	78.75%
Notes: 1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure.				

31"-RCS- 1302-8

Figure 19

L-2015-020

ATTACHMENT 3

TURKEY POINT UNIT 4

RELIEF REQUEST No. 17

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17, REVISION 0

Relief Request
In Accordance with 10CFR 50.55a(g)(5)(iii)

--Inservice Inspection Impracticality--

1. ASME Code Component(s) Affected

Class 1 inner radius in vessels
Class 1 and 2 pressure retaining welds in vessel and piping

2. Applicable Code Edition and Addenda

The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Rules for Inservice Inspection of Nuclear Power Plant Components, Section XI, 1998 Edition with Addenda through 2000 as amended by 10CFR50.55a, is the code of record for the Turkey Point Unit 4, 4th 10-year interval. ASME Section XI, 1998 Edition with Addenda through 2000 as amended by 10CFR50.55a, was utilized for Appendix VIII.

3. Applicable Code Requirement

Exam Cat.	Item No.	Examination Requirements
B-D	B3.120	Essentially 100% volumetric examination of the nozzle inner radius. As mandated by 10CFR50.55a(b)(2)(xxi)(A).
C-A	C1.10 C1.20	Essentially 100% volumetric examination of the weld length.
C-B	C2.21	Essentially 100% volumetric and surface examination of the nozzle to vessel welds.
C-F-1	C5.11	Essentially 100% volumetric and surface examination of circumferential welds ≥3/8" nominal wall thickness for piping >4" nominal pipe size.
C-F-1	C5.21	Essentially 100% volumetric and surface examination of circumferential welds >1/5" nominal wall thickness for piping ≥2" and ≤4" nominal pipe size.
R-A	R1.11	Essentially 100% volumetric examination of the circumferential welds. Risk Informed Selection.

As defined by ASME Code Case N-460, essentially 100% means more than 90% of the examination volume of each weld where reduction in coverage is due to interference by another component or part geometry.

4. Impracticality of Compliance

Due to the configuration, it is not possible to meet the examination coverage requirements of the ASME Code, Section XI, 1998 Edition with Addenda through 2000, as clarified by Code Case N-460. Relief is requested in accordance with 10CFR50.55a(g)(5)(iii). These areas were found during the 4th 10-year inservice inspection interval.

When a component has conditions, which limit the examination volume, Florida Power and Light is required to submit the information to the enforcement and regulatory authorities having jurisdiction at the plant site. This Relief Request has been written to address areas where those types of conditions exist and the required amount of coverage was reduced below the minimum acceptable.

When examined, the welds listed within this request did not receive the required code volume coverage due to their configuration and/or the presence of permanent attachments. These scanning limitations prohibit essentially 100% ultrasonic examination coverage of the required examination volume.

The Table included in this Relief Request summarizes the percent of coverage credited and references specific figures that show the extent of coverage.

Relief is requested from the ASME Boiler and Pressure Vessel Code required volume as identified in Figure IWB-2500-7, IWC-2500-1, IWC-2500-4 and IWC-2500-7. Additionally, for welds categorized as R-A in accordance with the Turkey Point Risk Informed (RI) Program (MD8875), the Figure IWB-2500-8 exam volume is increased, when required, to include internal counterbore areas.

5. Burden Caused by Compliance

It is not possible to obtain ultrasonic interrogation of greater than 90% of the required examination volume due to interference caused by configuration and/or permanent attachments. Examinations are performed to the maximum extent possible. The Ultrasonic (UT) techniques for each weld were reviewed to determine if additional coverage could be achieved. For the welds listed in the Table, FPL determined that removal of the obstruction was not possible without significant work, increased radiation exposure, and/or damage to the plant. Additional weld preparation by welding or metal removal is a modification of the examination area requiring significant engineering and construction personnel support.

Radiography is impractical due to the amount of work being performed in the areas on a 24-hour basis. This would result in numerous work-related stoppages and increased exposure due to the shutdown of and startup of other work in the areas. The water must be drained from systems where radiography is performed, which increases the radiation dose rates over a much broader area than the weld being examined. There would be significant burden associated with the performance of weld or area modifications or radiography in order to increase the examination coverage.

6. Proposed Alternative and Basis for Use

TURKEY POINT UNIT 4
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Proposed Alternative

1) Periodic system pressure tests in accordance with ASME Section XI Category B-P, Table IWB-2500-1 and C-H, Table IWC-2500-1.

2) Conduct ultrasonic examinations to the maximum extent possible.

3) Regular walkdowns by operations personnel and system engineers are performed on systems outside containment to check for leakage, piping configuration, and/or damage. During outages, system engineers walkdown systems inside and outside containment. This walkdown is performed to look for system anomalies that could affect plant performance.

Basis

The attached Table provides the percent of coverage credited and references specific figures that illustrate the extent of coverage for each weld. The examination figures of ASME Section XI, 1998 Edition with Addenda through 2000, define the examination volume required. The system, diameter, pipe schedule and material are identified for each item within the Table. The angles, Ultrasonic wave modes (Shear-S or Longitudinal-L) that were employed for examination and impracticality of compliance are listed for each weld. Arrows and lines on the figures illustrate the UT transducer beam direction and extent of the area examined.

10 CFR 50.55a(g)(4) recognizes that throughout the service life of a nuclear power facility, components which are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements set forth in the ASME Code to the extent practical within the limitations of design, geometry and materials of construction of the components.

FPL performed the examinations to the extent possible. There is no plant-specific, NextEra fleet or industry operating experience regarding potential degradation specific to the subject welds included in this relief request. However, isolated occurrences of stress corrosion cracking have occurred in stainless steel materials in the industry. To address the concerns of these isolated cases, periodic walkdowns by plant personnel provide assurance that any isolated degradation would be identified at the onset before a safety concern could develop.

The Class 1 and 2 welds identified in the table are located within either the reactor containment building or reactor auxiliary building. Regular walkdowns by operations personnel and system engineers are performed on systems in the reactor auxiliary building to check for leakage, piping configuration, and/or damage. During outages, system engineers perform boric acid walkdowns of all systems inside containment. This walkdown is performed to look for borated system as well as system abnormalities that could affect plant performance. Also, a system pressure test and VT-2 visual examination is performed each refueling outage for Class 1 connections and each period for Class 2 and 3 connections without removal of insulation by examining the accessible and exposed surfaces and joints of the insulation.

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Leakage monitoring inside containment at Turkey Point Unit 4 is provided by the reactor cavity (containment) sump inlet flow monitoring system. This system has high level and alert status alarms in the control room. This system has Tech Spec required monitoring (TS 3/4.4.6.2.1(b)) at least once every 12 hours.

All preservice and inservice examinations were performed by personnel certified in accordance with IWA-2300 of 1998 Edition with Addenda of the ASME Section XI Code. UT examinations of the austenitic piping welds utilized equipment, procedures, and personnel qualified in accordance with ASME Section XI, Appendix VIII, Supplement 2, 1998 Edition with Addenda through 2000 and the Performance Demonstration Initiative (PDI) program.

The UT techniques for each weld were reviewed to determine if additional coverage could be achieved. FPL's procedures require the examiner to make an attempt to achieve complete coverage by using alternative techniques such as using a smaller wedge thus reducing the distance from the exit point to the front of the wedge, changing angles or reducing the search unit element size. Any alternative equipment is required to be in compliance with the limits specified in the qualified procedure. Alternate techniques were investigated at the time of discovery.

For piping welds performed in accordance with Appendix VIII, Supplement 2, the coverage credited is limited when access can only be obtained from one side. No coverage is claimed past the centerline in the coverage credited in the Table since access for scanning was not available from that side of the weld and the Performance Demonstration Qualification Summary (PDQS) for the qualified procedure, PDI-UT-2, states that "the austenitic single side qualification documented on this summary demonstrates application of best available technology, but do not meet the requirements of 10CFR 50.55a(b)(2)(xvi)(B)." It should be noted that UT was performed through the weld to obtain the maximum possible Code examination volume and, as shown in the figures, the theoretical beam path extends into the far side for the examinations performed. While the coverage is not included in the Table, the techniques employed for the single side examination are noted in the figures and provided for a best effort examination. The coverage obtained was the maximum practical. Therefore, the UT examinations conducted using the Appendix VIII, Supplement 2, qualified procedure provide reasonable assurance for the detection of flaws on the far side of welds where the ultrasonic beam has been transmitted even though not presently qualified.

The Risk Informed Inservice Inspection (RI-ISI) Program for Class 1 piping welds was submitted (Relief Request 3) and approved (SE dated December 9, 2008 TAC No. MD8875) as an alternative to the requirements of Section XI as for the fourth 10-year interval.

For the Risk Informed welds 31"-RCS-1402-6 and 31"-RCS-1403-8, the ASME Section XI 1998 Edition with Addenda through 2000, Figure IWB-2500-8(c examination volume is ¼" from toe of the weld on each side for the bottom 1/3t. However, the Risk Informed examination volume is extended to ½" from each toe of the weld and due to the

counterbore on the elbow side as shown in Figure 19, the examination volume is extended an additional ½". If a dotted line was drawn vertically ¼" from the elbow weld toe and the ASME Code Section XI 1998 Edition with Addenda through 2000, the examination volume identified in Figure IWB-2500-8 from the elbow side would be essentially 100% coverage achieved. Because of the extended volume past the elbow counterbore, the elbow OD transition and the risk informed extended volume prohibits obtaining essentially 100% coverage as identified in the ASME Section XI 1998 Edition with Addenda through 2000, Figure IWB-2500-8. There are 5 welds in the reactor coolant system selected with similar configurations in the Risk Informed Program. Welds 31"-RCS-1402-6 and 31"-RCS-1403-8 are the only weld considered limited.

For all welds except 31"-RCS-1402-6, 31"-RCS-1403-8, 4-RHE-A1, and 4-RHE-A2 listed in Table 1, surface examinations were performed and not limited. Welds 31"-RCS-1402-6 and 31"-RCS-1403-8 do not require a surface exam per FPL's Risk Informed Program. Welds 4-RHE-A1 and 4-RHE-A2 are Class 2 Category C-A welds, which do not require surface examinations by Code.

In all cases, 100% of the accessible Code required surface area was examined. All welds had a surface examination (liquid penetrant) and radiographic (RT) performed and were acceptable for service in accordance with the requirements of ASA B31.1, 1955 Edition.

The surface and volumetric examinations of all the items listed did not reveal any recordable or reportable flaws in the examination zone or adjacent to any volumetric limitations.

The extent of examination volumes achieved via surface and/or volumetric examinations, combined with the system pressure tests and system walk downs, provide assurance of an acceptable level of quality and safety.

7. Duration of Proposed Alternative

This relief request is applicable to the Turkey Point unit 4 Fourth Inservice Inspection Interval which began April 15, 2004 and ended April 14, 2014.

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8. References

10CFR50.55a

ASME Section XI, "Rules For Inservice Inspection of Nuclear Power Plant Components," 1998 Edition with Addenda through 2000

ASME Section XI, Division 1, Code Case N-460, "Alternative Examination Coverage for Class 1 and Class 2 Welds, Section XI, Division 1"

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System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Ultrasonic Examination Coverage (%)	Angles(s)/ and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Pressurizer Spray Nozzle Inner Radius	Pressurizer Spray Nozzle SP-04-1-IR	2011	Exam Category B-D Item No. B3.120 Fig. IWB-2500-7(D) 82%	60°S	1	Examination limited due to Raised Letters in required scanning area No Recordable Indications	Surface examination is not required by Code.
Residual Heat Exchanger Head to Shell	Residual Heat Removal 4-RHE-A1 Stainless Steel	2005	Exam Category C-A Item No. C1.20 Fig. IWC-2500-1 51.5%	45°S 60°S 70°S 60°L	2	Inservice examination limited due to support proximity to weld on head side and reinforcement plates and welded attachments on the shell side. No Recordable Indications	Surface examination is not required by Code.
Residual Heat Exchanger Shell to Flange	Residual Heat Removal 4-RHE-A2 Stainless Steel	2005	Exam Category C-A Item No. C1.10 Fig. IWC-2500-1 43%	45°S 60°S 70°S 60°L	3	Inservice examination limited due to flange configuration. Shell side is limited due to nozzle reinforcements and welded attachments. No Recordable Indications	Surface examination is not required by Code.
Outlet Nozzle to Shell	Residual Heat Removal 4-RHE-A11 Stainless Steel	2011	Exam Category C-B Item No. C2.21 Fig. IWC-2500-4(a)	45°S 60°S 70°S 45°L 60°L	4	Inservice examination limited to single side access due to nozzle configuration. Shell side is limited due to close proximity of flange to nozzle weld and weld	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Ultrasonic Examination Coverage (%)	Angles(s)/ and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
			53.5%			crown configuration. No Recordable Indications	
Flange to Elbow	Safety Injection 3"-SI-2401-1 (3"-80) Stainless Steel	2014	Exam Category C-F-1 Item No. C5.21 Fig. IWC-2500-7(a) 45.4%	45°S 60°S 70°S	5	Inservice examination limited to single side access due to flange configuration. Elbow side is limited on intrados due to curvature which limits contact. No Recordable Indications	iquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Pipe to Elbow	Safety Injection 3"-SI-2403-35 (3"-80) Stainless Steel	2011	Exam Category C-F-1 Item No. C5.21 Fig. IWC-2500-7(a) 86.5%	45°S 60°S 70°S	6 11	Inservice examination limited due to intrados of elbow. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Elbow to Pipe	Safety Injection 3"-SI-2403-36 (3"-80) Stainless Steel	2011	Exam Category C-F-1 Item No. C5.21 Fig. IWC-2500-7(a)	45°S 60°S 70°S	7	Inservice examination limited due to intrados of elbow. Pipe side is limited due to welded saddle.	Liquid Penetrant examination performed obtaining 97.5% coverage. Support welds located at toe of weld from 4.5" to 6.76". No recordable indications

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
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System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Ultrasonic Examination Coverage (%)	Angles(s)/ and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
			66%			No Recordable Indications	detected
Pipe to Valve	Safety Injection 8"-SI-2404-2 (8"-120) Stainless Steel	2009	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 70°S 60°L	8	Inservice examination limited to single side access due to valve configuration. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Tee to Pipe	Safety Injection 8"-SI-2407-8 (8"-120) Stainless Steel	2011	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 76%	45°S 60°S 70°S 60°L	9	Inservice examination limited due to intrados of tee. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Pipe to Valve	Safety Injection 10"-SI-2407-4 (10"-140) Stainless Steel	2009	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S 60°L	10	Inservice examination limited is limited to single side access due to valve configuration. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
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System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Ultrasonic Examination Coverage (%)	Angles(s)/ and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Valve to Elbow	Safety Injection 10"-SI-2407-5 (10"-140) Stainless Steel	2009	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S 60°L	11	Inservice examination limited is limited to single side access due to valve configuration. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Pipe to Flange	Safety Injection 12"-RHR-2402-15 (12"-40) Stainless Steel	2005	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	12	Inservice examination limited to single side access due to flange configuration. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Tee to Tee	Residual Heat Removal 14"-RHR-2403-1 (14"-40) Stainless Steel	2005	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 62%	45°S 60°S 70°S	13	Inservice examination limited on both sides due to intrados of tee to tee configuration. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Tee to Pipe	Residual Heat Removal 14"-RHR-2403-2 (14"-40) Stainless Steel	2005	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 81%	45°S 60°S 70°S	14	Inservice examination limited due to intrados of tee. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.

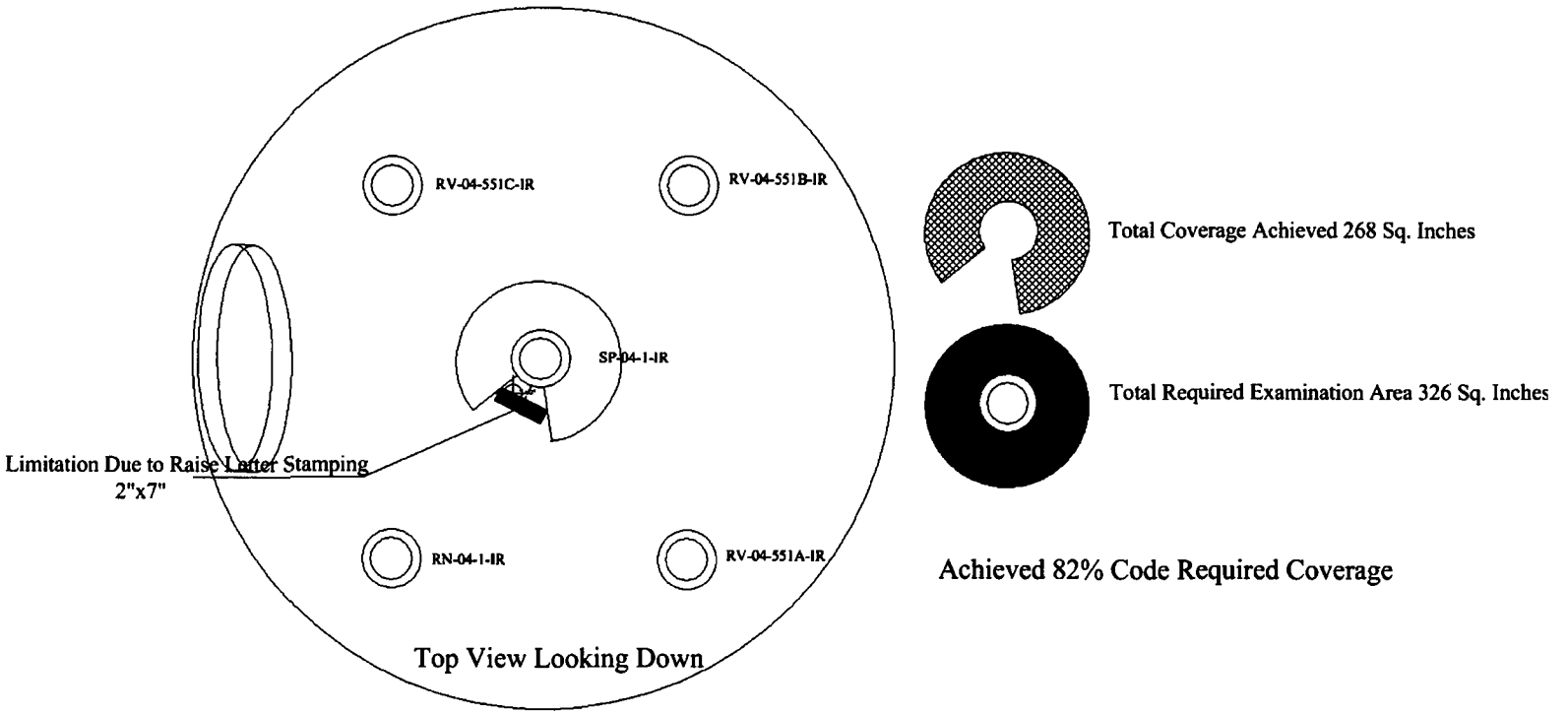
TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Ultrasonic Examination Coverage (%)	Angles(s)/ and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Elbow to Valve	Residual Heat Removal 14"-RHR-2403-4 (14"-40) Stainless Steel	2005	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 50%	45°S 60°S 70°S	15	Inservice examination limited to single side access due to valve configuration. Examination on elbow side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Pipe to Tee	Residual Heat Removal 14"-RHR-2404-17 (14"-40) Stainless Steel	2008	Exam Category C-F-1 Item No. C5.11 Fig. IWC-2500-7(a) 81%	45°S 70°S	16	Inservice examination limited due to intrados of tee. Examination on pipe side complete. No Recordable Indications	Liquid Penetrant examination performed obtaining 100% coverage. No recordable indications detected.
Elbow to Pipe	Reactor Coolant 31"-RCS-1402-6 Cast Material – Thickness 2.76" Stainless Steel – Thickness 2.33"	2011	Exam Category R-A Item No. R1.11 Fig. IWB-2500-8 78.75%	Cast 45°L Stainless 45S 60S 45L	17	Inservice examination limited due to elbow OD configuration. Examination from pipe side complete No Recordable Indications	Risk-Informed. Surface examination is not required.

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

System Configuration	System Component ID Diameter-Schedule Material	Year of Exam	Ultrasonic Examination Coverage (%)	Angles(s)/ and Wave Mode	Fig.	Impracticality of Compliance	Surface Examination Results
Elbow to Pipe	Reactor Coolant 31"-RCS-1403-8 Cast Material – Thickness 2.75" Stainless Steel – Thickness 2.40	2014	Exam Category R-A Item No. R1.11 Fig. IWB-2500-8 85.5%	Cast 45° L Stainless 45°S 60°L	18	Inservice examination limited due to elbow OD configuration. Examination complete from pipe side. No Recordable Indications	Risk-Informed. Surface examination is not required.

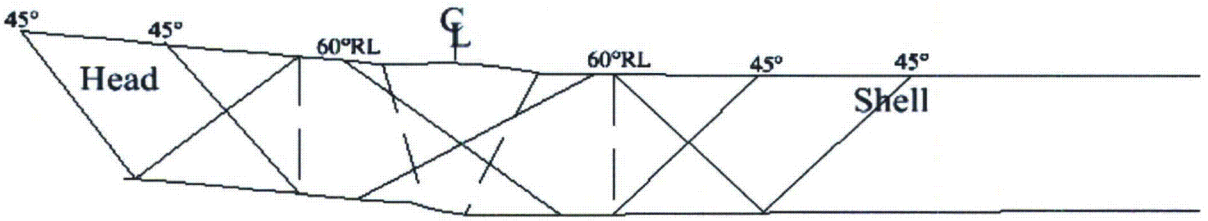
TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



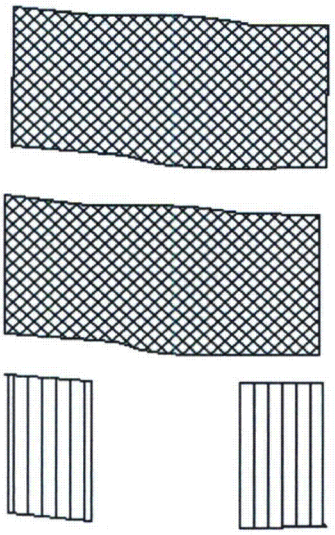
SP-04-1-IR
Figure 1

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

1.0" .90" 1.1" .96" .95" .95"



Examination Limted on Shell side due to Nozzles and Supports Total Length 81"
Total Weld Length 132"



Required Exam Volume - 1.88 Sq. Inches

Axial Examination Coverage Achieved 1.44 Sq. Inches (61%)

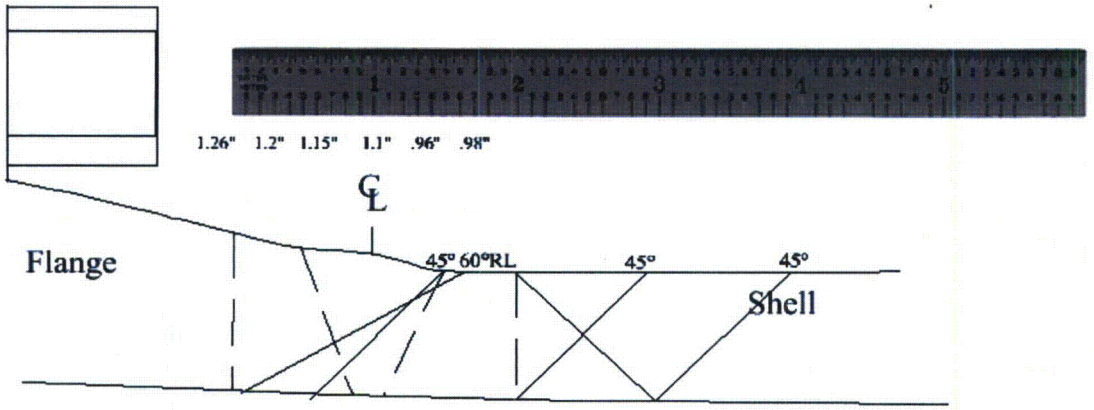
Circ. Examination Coverage Achieved 1.00 Sq. Inches (42%)

4-RHE-A1

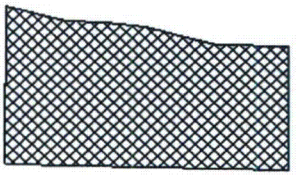
Total Examination Coverage Achieved 51.5%

4-RHE-A1
Figure 2

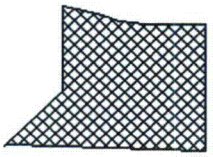
TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



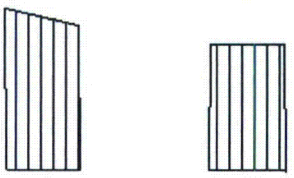
Examination limted due to Nozzles and Supports Total Length 29"
Total Weld Length 132"



Required Exam Volume - 2.13 Sq. Inches



Axial Examination Coverage Achieved 1.01 Sq. Inches (36%)



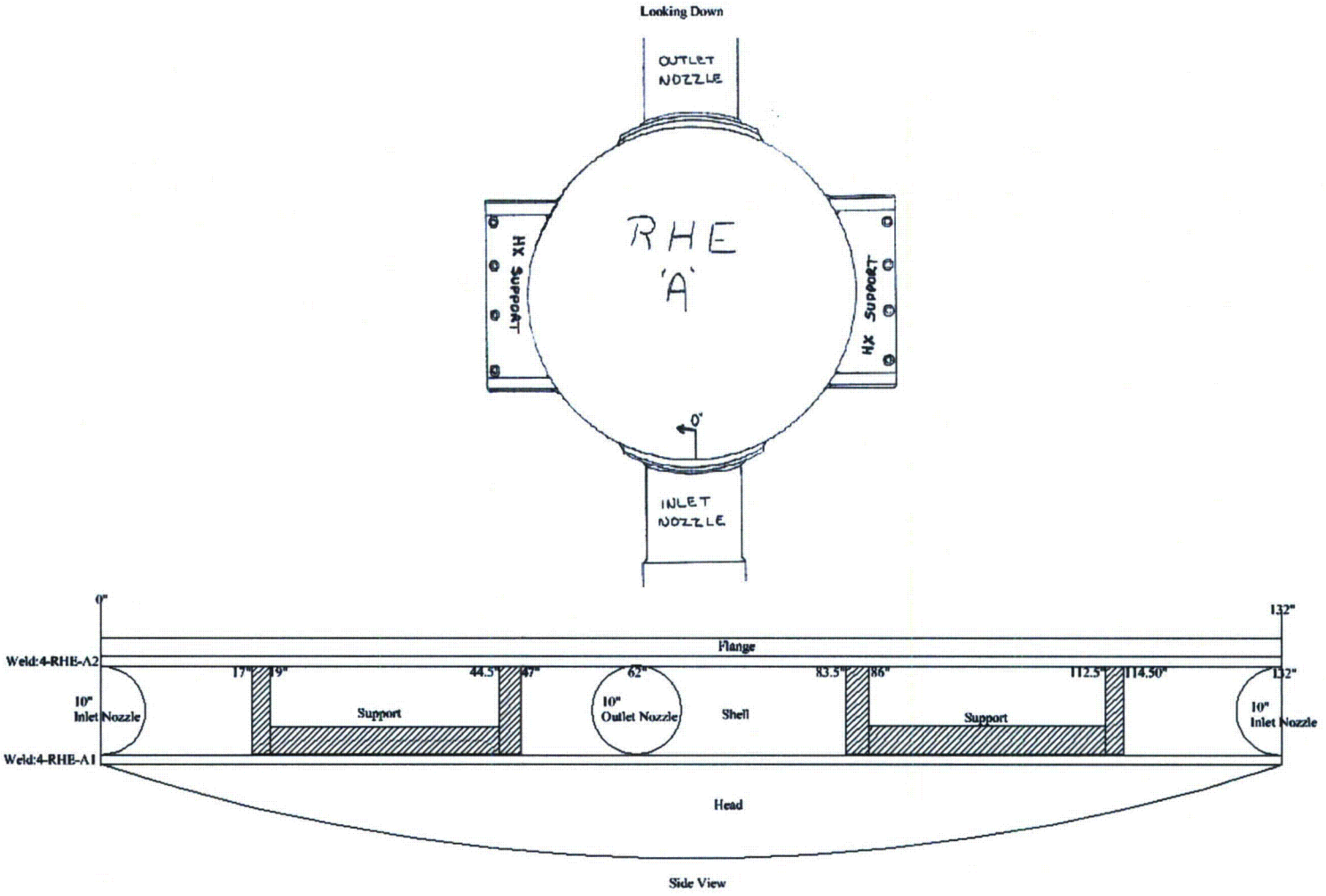
Circ. Examination Coverage Achieved 1.34 Sq. Inches (50%)

4-RHE-A2

Total Examination Coverage Achieved 43%

4-RHE-A2
Figure 3

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



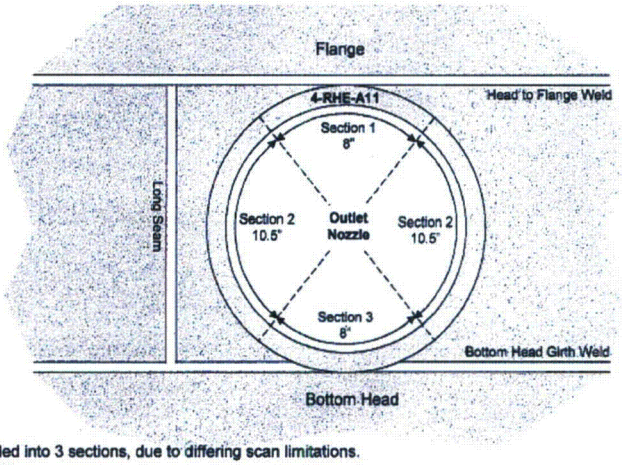
4-RHE-A2 & 4-RHE-A1
Figure 2 & 3

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

Examination Coverage Summary

Component Information	Beam Directions
Weld ID: 11-4-RHE-A11	↑ = Looking In
Configuration: Head to Outlet Nozzle	↓ = Looking Out
Exam Area: 0.88 in²	← = Looking CCW
Exam Length: 37 in	→ = Looking CW

Section & Direction	Area Examined		Exam Area		Length Examined		Exam Length		Percent Coverage
1 / ↑	(0.41	/	0.88	) x (	8.0	/	37.0	) x 100 =	10.1%
1 / ↓	(0.29	/	0.88	) x (	8.0	/	37.0	) x 100 =	7.1%
1 / ←	(0.42	/	0.88	) x (	8.0	/	37.0	) x 100 =	10.3%
1 / →	(0.42	/	0.88	) x (	8.0	/	37.0	) x 100 =	10.3%
2 / ↑	(0.67	/	0.88	) x (	21.0	/	37.0	) x 100 =	43.2%
2 / ↓	(0.29	/	0.88	) x (	21.0	/	37.0	) x 100 =	18.7%
2 / ←	(0.51	/	0.88	) x (	21.0	/	37.0	) x 100 =	32.9%
2 / →	(0.51	/	0.88	) x (	21.0	/	37.0	) x 100 =	32.9%
3 / ↑	(0.67	/	0.88	) x (	8.0	/	37.0	) x 100 =	16.5%
3 / ↓	(0.29	/	0.88	) x (	8.0	/	37.0	) x 100 =	7.1%
3 / ←	(0.51	/	0.88	) x (	8.0	/	37.0	) x 100 =	12.5%
3 / →	(0.51	/	0.88	) x (	8.0	/	37.0	) x 100 =	12.5%
	(	/	~	) x (		/	~	) x 100 =	~
	(	/	~	) x (		/	~	) x 100 =	~
	(	/	~	) x (		/	~	) x 100 =	~
	(	/	~	) x (		/	~	) x 100 =	~
	(	/	~	) x (		/	~	) x 100 =	~
								Total Percent:	214.1%
Code Examination Coverage (Total Percent / 4 Sound Beams):									53.5%

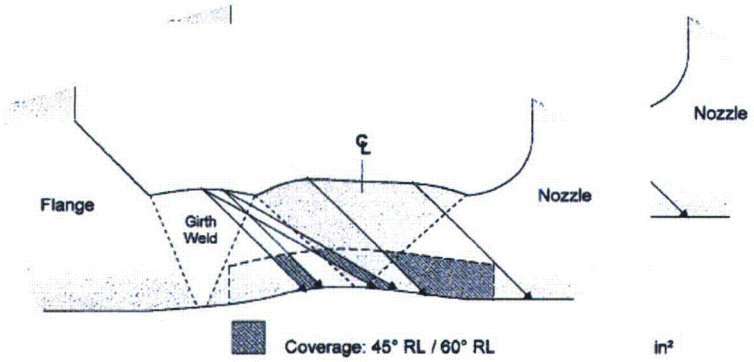


Coverage is divided into 3 sections, due to differing scan limitations.
Section 1 = 8" long.
Section 2 = (10.5 + 10.5) = 21" long.
Section 3 = 8" long.

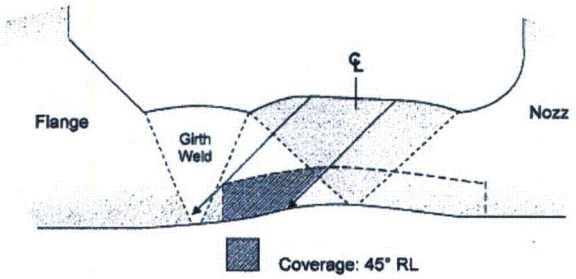
Weld length = 37" / WCW = 2" / Exam Area = (0.35" x 2.5") = 0.88 in².

4-RHE-A11
Figure 4

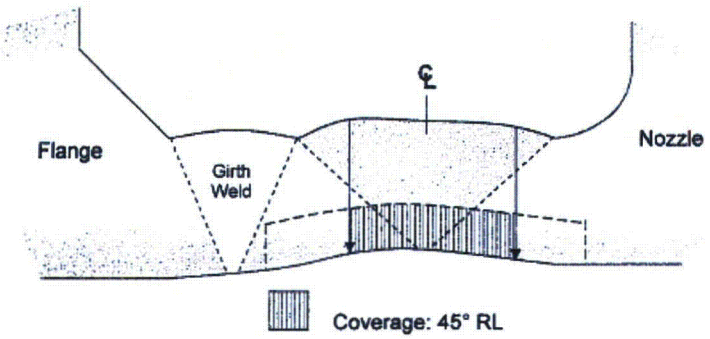
TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



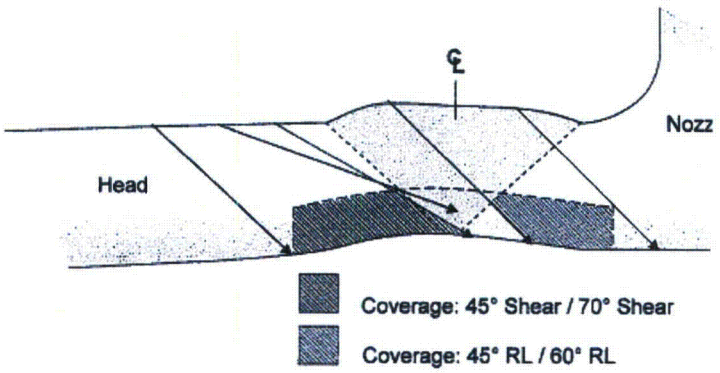
Exam Area = 0.88 in²
Examined (0.2 x 0.35) + (0.15 x 0.35) + (0.35(0.65 + 1)/2) = 0.41 in²
(0.41 / 0.88) x (8" of 37") = 10.1%



Exam Area = 0.88 in²



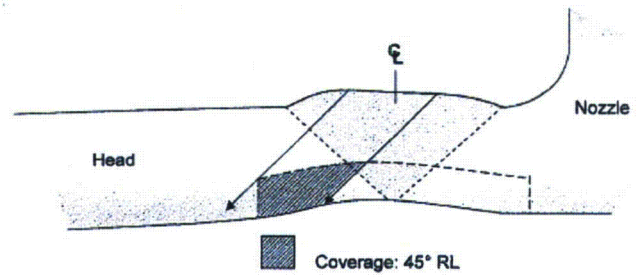
Exam Area = 0.88 in²
Examined (1.2 x 0.35) = 0.42 in²
(0.42 / 0.88) x (8" of 37") = 10.3%

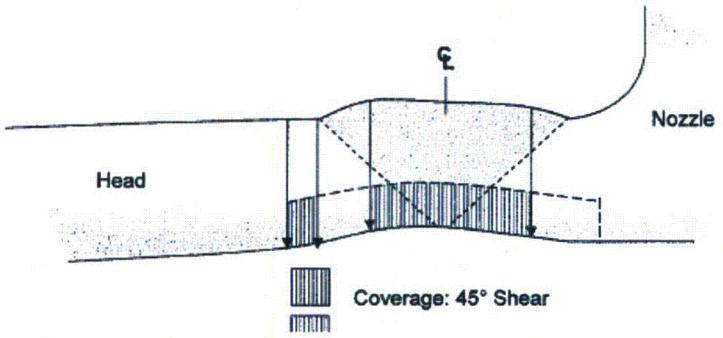


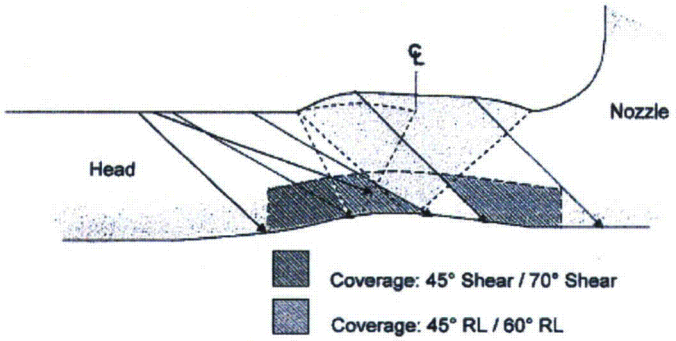
Exam Area = 0.88 in²
Examined (0.35(0.8 + 1.4)/2) + (0.35(0.65 + 1)/2) = 0.67 in²
(0.67 / 0.88) x (21" of 37") = 43.2%

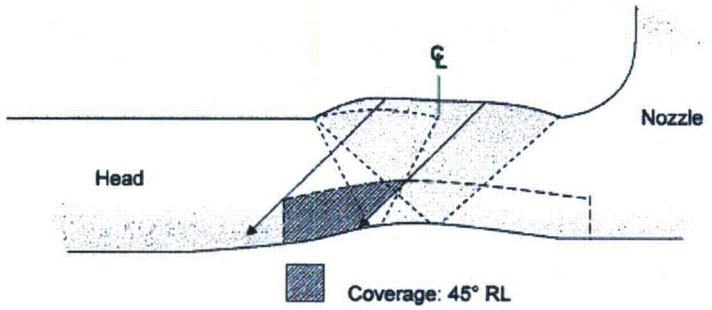
4-RHE-A11
Figure 4

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0







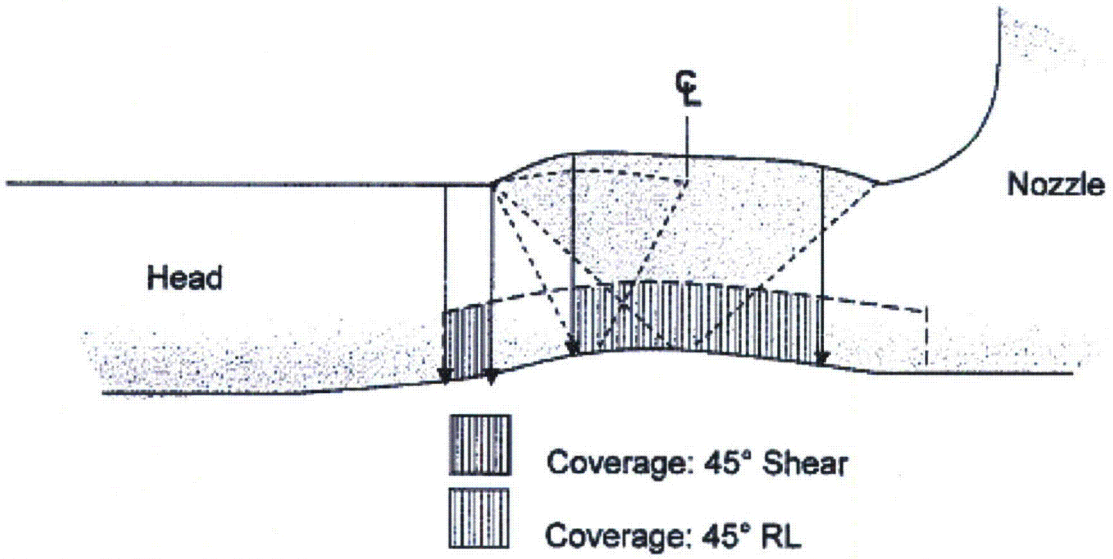


Exam Area = 0.88 in²
Examined (0.35(0.8 + 1.4)/2) + (0.35(0.65 + 1)/2) = 0.67 in²
(0.67 / 0.88) x (8" of 37") = 16.5%

Exam Area = 0.88 in²
Examined (0.35(0.65 + 1)/2) = 0.29 in²
(0.29 / 0.88) x (8" of 37") = 7.1%

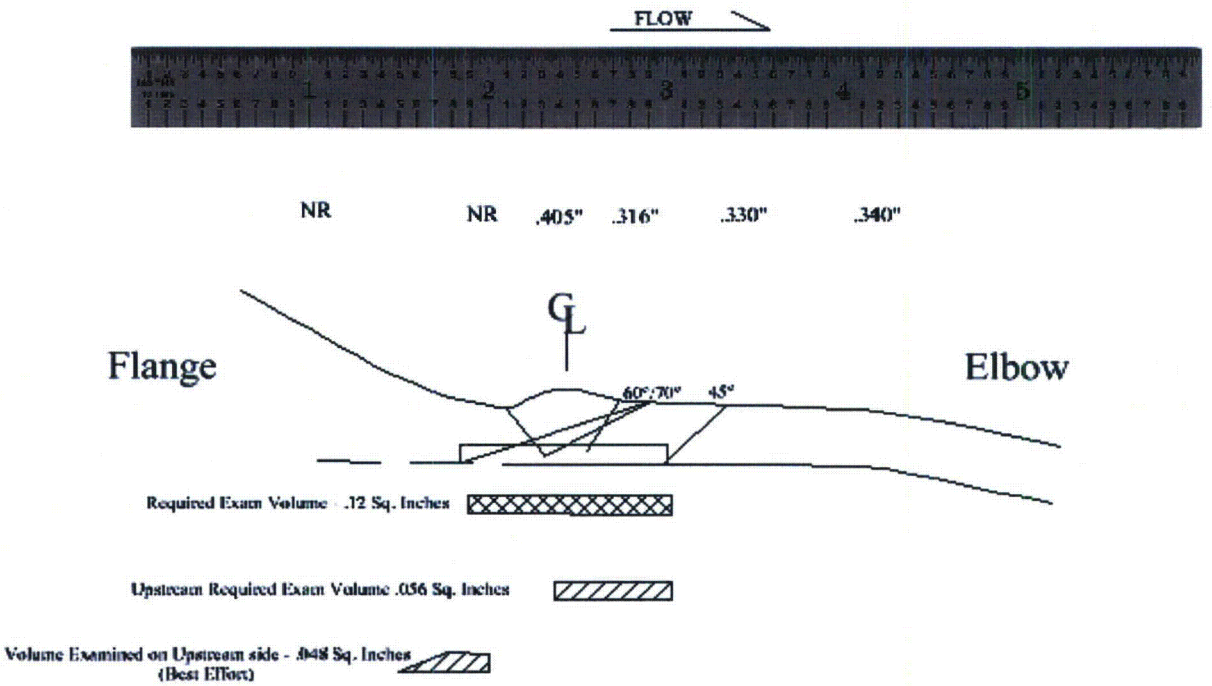
4-RHE-A11
Figure 4

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



Exam Area = 0.88 in²
Examined (0.25 x 0.35) + (1.2 x 0.35) = 0.51 in²
(0.51 / 0.88) x (8" of 37") = 12.5%

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



Examination Volume Dimensions: Length 11.5" x Width 1.15" x Height .11"				
Weld Thickness= .405" Weld Length= 9.5" Weld Width= .68"				
Coverage Summary- Weld # 3"-SI-2401-1				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	**Upstream-Axial**	**Upstream- Circ.**	**Downstream Axial**	**Downstream Circ.**
45/60	0%	0%	81.8%	100%
70	69% (best effort)			
			Code Coverage Total	**45.4%**
		Best Effort Coverage (Max 25%) Total		**17.35%**

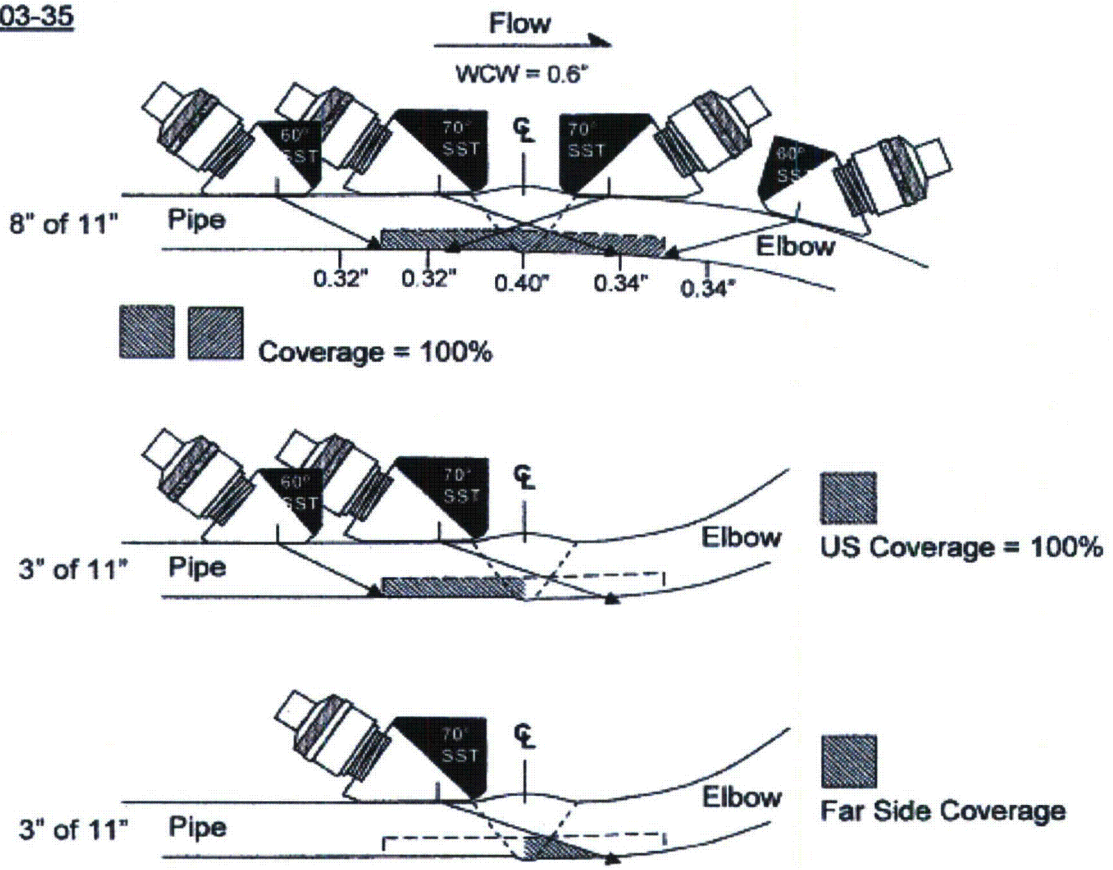
Notes:

1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

3"-SI-2401-1
Figure 5

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

3"-SI-2403-35



Far side of weld examined as per single sided access rules – No coverage credit taken.

Scan Limitation

No exams performed on intrados of elbow for 3" due to poor contact.

Coverage Calc:

- US Axial: 100% (11" of 11") = 100%
- DS Axial: 100% (8" of 11") = 73%
- US Circ: 100% (11" of 11") = 100%
- DS Circ: 100% (8" of 11") = 73%

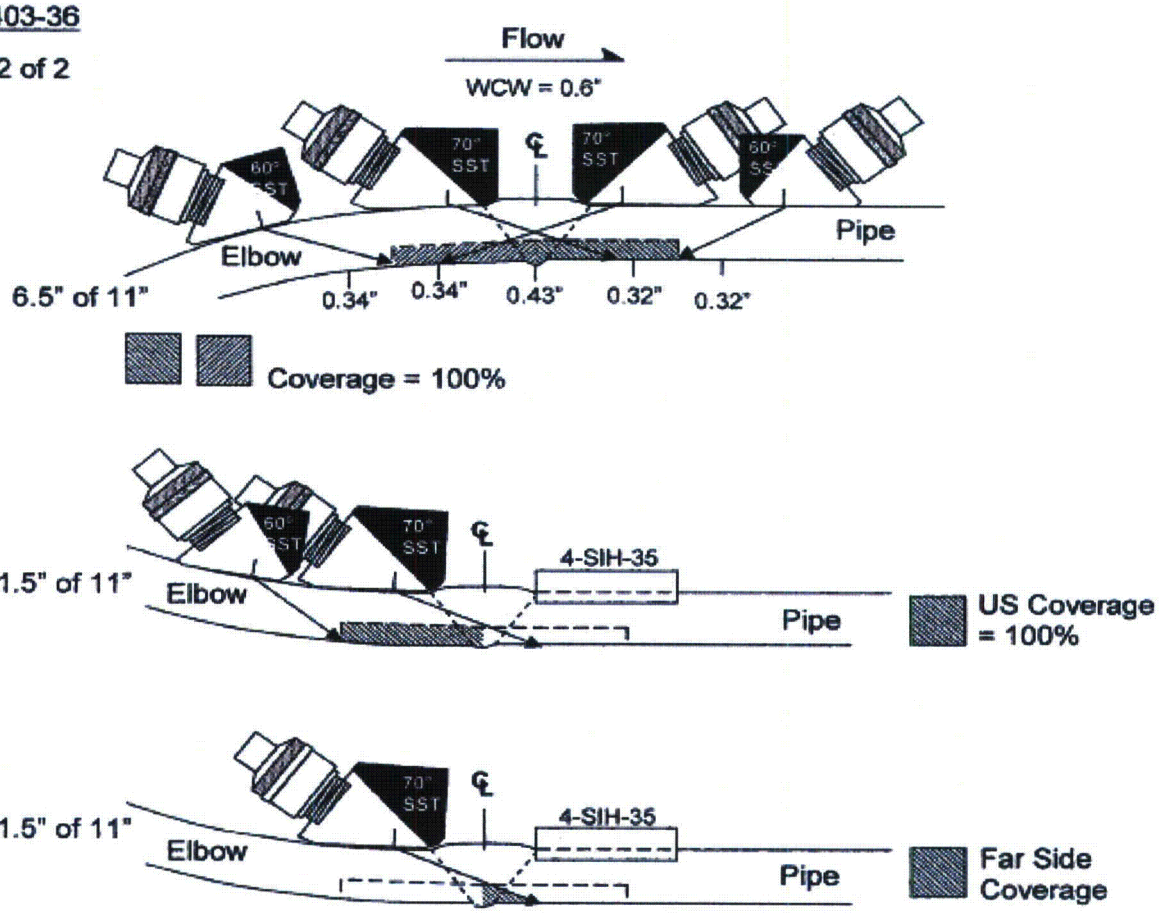
Code Coverage: (100% + 73% + 100% + 73%)/4 = 86.5%

3"-SI-2403-35
Figure 6

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

3"-SI-2403-36

Sketch 2 of 2



Far side of weld examined as per single sided access rules – No coverage credit taken.

Coverage Calc:

- US Axial: 100% (8" of 11") = 73%
- DS Axial: 100% (6.5" of 11") = 59%
- US Circ: 100% (8" of 11") = 73%
- DS Circ: 100% (6.5" of 11") = 59%

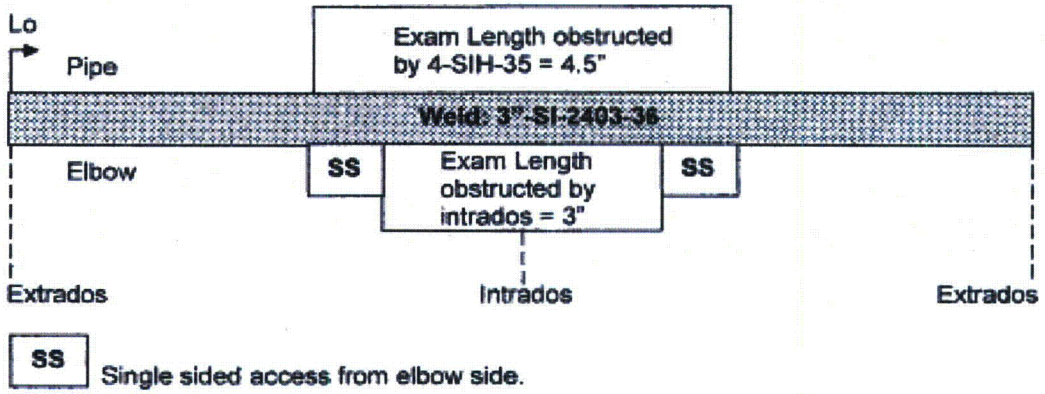
Code Coverage: (73% + 59% + 73% + 59%)/4 = 66%

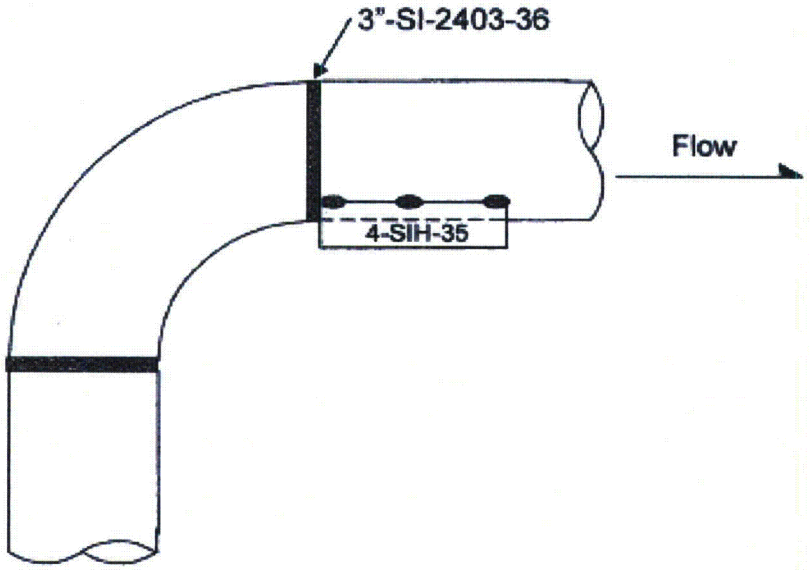
3"-SI-2403-36
Figure 7

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

Scan Limitations

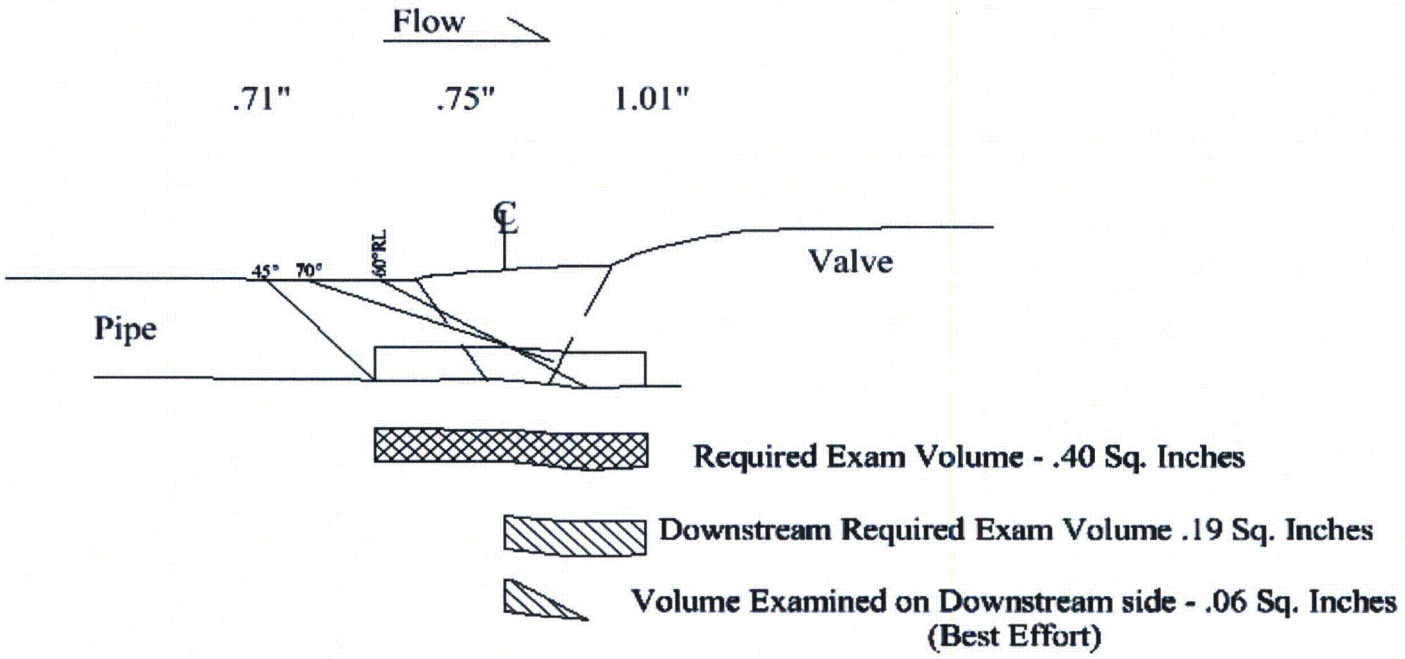
- Upstream: Intrados of Elbow. No exams for 3" of 8" due to poor contact.
- Downstream: Pipe Support 4-SIH-35. Dimension = 2.5", scans obstructed for an additional 1" on each side due to U-bolt contacting back of probe. Obstructed length = 4.5" of 11"





3"-SI-2403-36
Figure 7

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

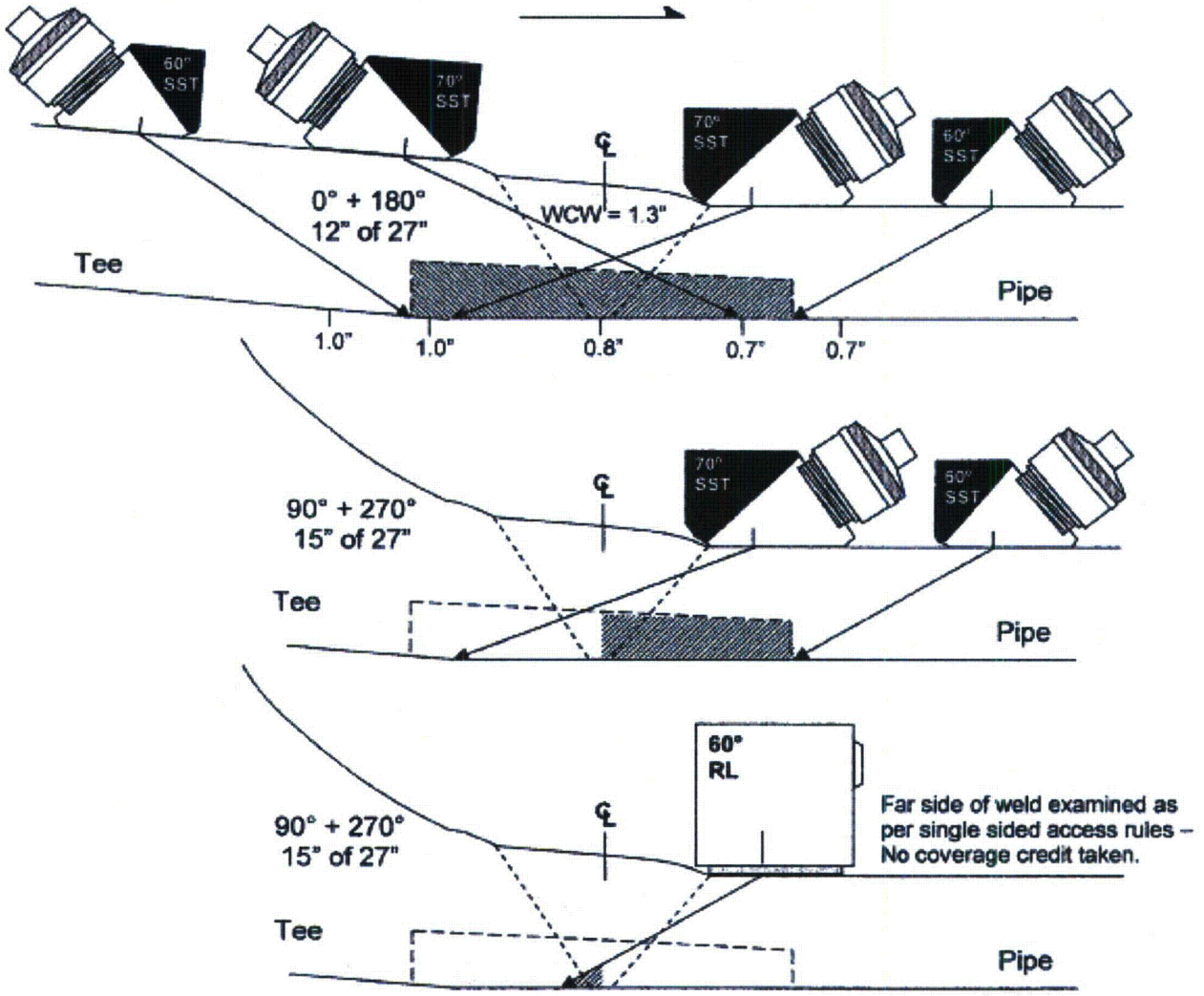


Examination Volume Dimensions: Length 28" x Width 1.60" x Height .37"				
Weld Thickness= .75" Weld Length= 28" Weld Width= 1.10"				
Coverage Summary- Weld # 8"-SI-2404-2				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	**Upstream-Axial**	**Upstream- Circ.**	**Downstream Axial**	**Downstream Circ.**
45/70	100%	100%	0%	0%
60RL			31% (best effort)	
			Code Coverage Total	**50%**
		Best Effort Coverage (Max 25%) Total		**7.75%**

Notes:
1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

8"-SI-2404-2
Figure 8

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



Scan Limitation: Radius of Tee limited US scans.
Examined 12" of 27" axial exam. Examined 16" of 27" circ exam.

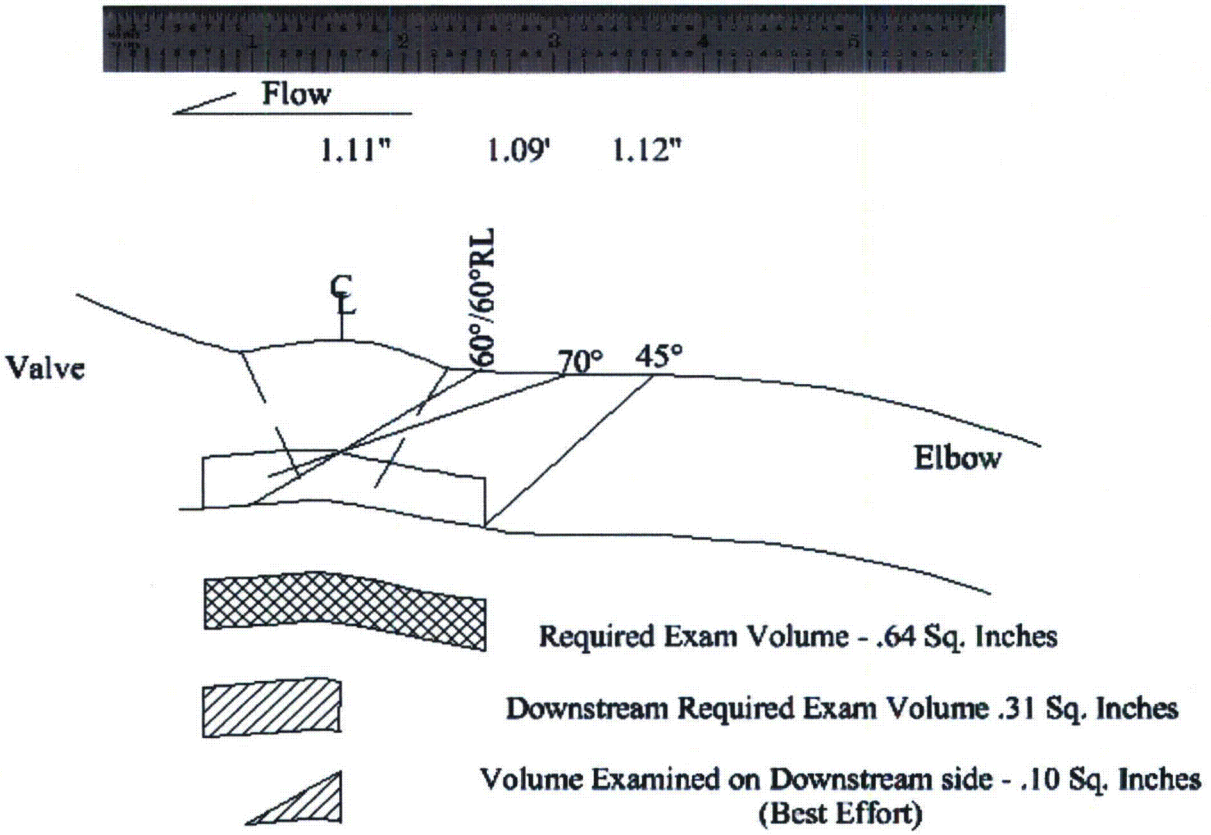
Coverage Calc:

- US Axial = 100% (12" of 27") = 44%
- DS Axial = 100% (27" of 27") = 100%
- US Circ = 100% (16" of 27") = 59%
- DS Circ = 100% (27" of 27") = 100%

Code Coverage = (44% + 100% + 59% + 100%)/4 = 76%

8"-SI-2407-8
Figure 9

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

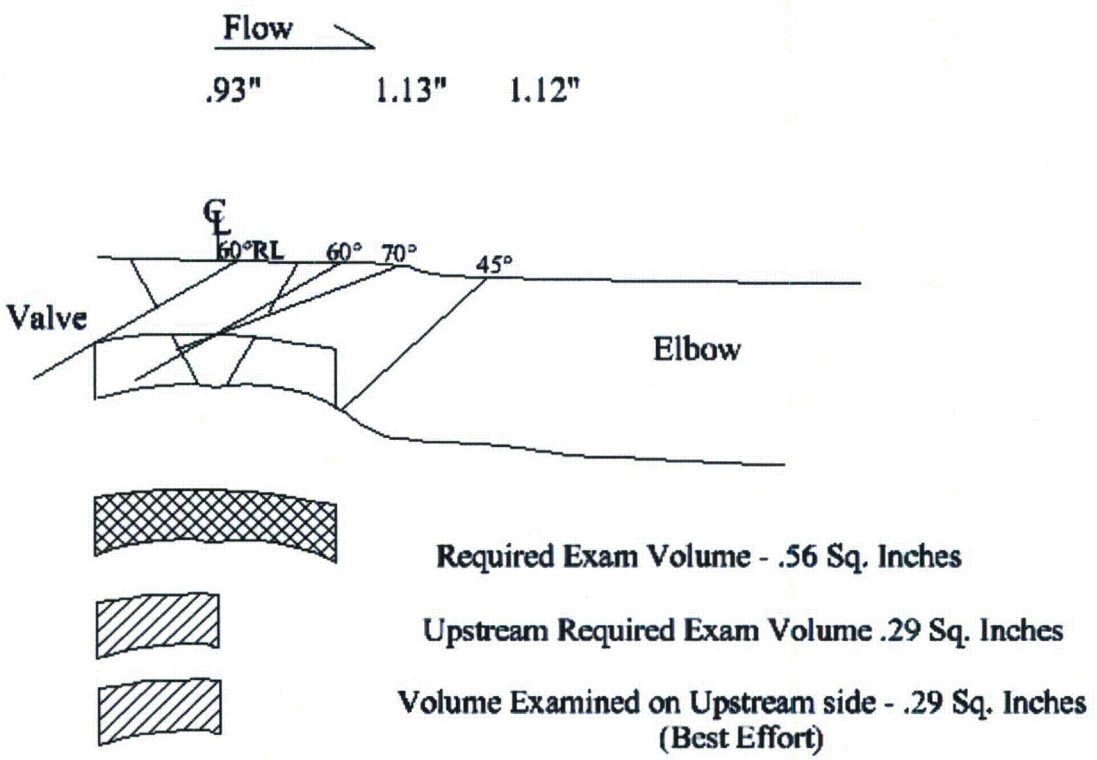


Examination Volume Dimensions: Length 31.0" x Width 1.70" x Height .35" Weld Thickness= 1.10" Weld Length= 31.0" Weld Width= 1.20"				
Coverage Summary- Weld # 10"-SI-2407-4				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60/70	100%	100%	0%	0%
60RL			32% (best effort)	
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		8%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

10"-SI-2407-4
Figure 10

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0

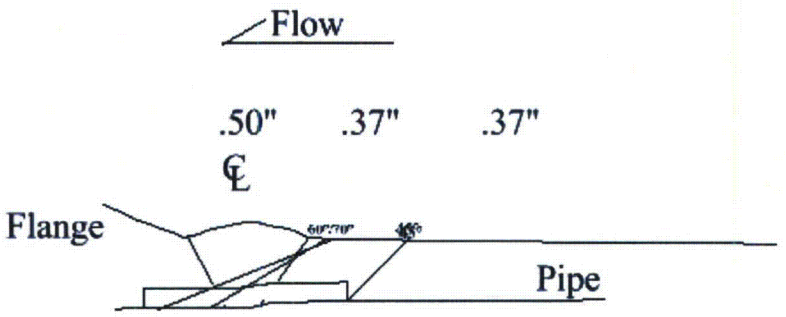


Examination Volume Dimensions: Length 31.0" x Width 1.60" x Height .37"				
Weld Thickness= .93" Weld Length= 31.0" Weld Width= 1.10"				
Coverage Summary- Weld # 10"-SI-2407-5				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	**Upstream-Axial**	**Upstream-Circ.**	**Downstream Axial**	**Downstream Circ.**
45/60/70	0%	0%	100%	100%
60 RL	50% (best effort)			
			Code Coverage Total	**50%**
		Best Effort Coverage (Max 25%) Total		**25%**

Notes:
1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

10"-SI-2407-5
Figure 11

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



Required Exam Volume - .16 Sq. Inches

Downstream Required Exam Volume .07 Sq. Inches

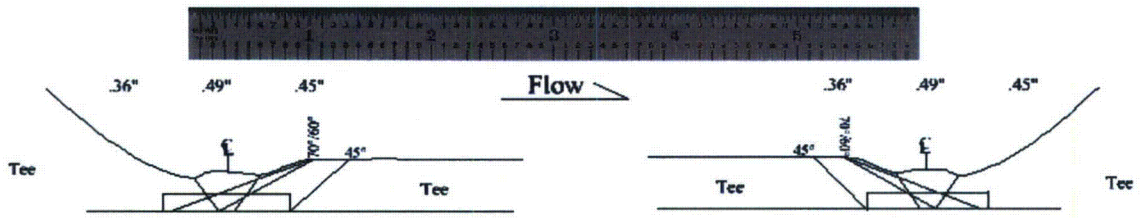
Volume Examined on Downstream side - .04 Sq. Inches
(Best Effort)

Examination Volume Dimensions: Length 38" x Width 1.28" x Height .12" Weld Thickness= .50" Weld Length= 38" Weld Width= .78"				
Coverage Summary- Weld # 12"-RHR-2402-15				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60/70	100%	100%	0%	0%
70			52% (best effort)	
			Code Coverage Total	50%
		Best Effort Coverage (Max 25%) Total		14%

Notes:
1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

12"-RHR-2402-15
Figure 12

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



Required Exam Volume - .15 Sq. Inches

Upstream Required Exam Volume .07 Sq. Inches

Volume Examined on Upstream side - .04 Sq. Inches (Best Effort)

Required Exam Volume - .15 Sq. Inches

Downstream Required Exam Volume .07 Sq. Inches

Volume Examined on Downstream side - .04 Sq. Inche (Best Effort)

Examination Limited to Single side from 7" to 15" and 29 to 37" total 16"

Examination Volume Dimensions: Length 43" x Width 1.06" x Height .14"
Weld Thickness= .49" Weld Length= 43" Weld Width= .56"

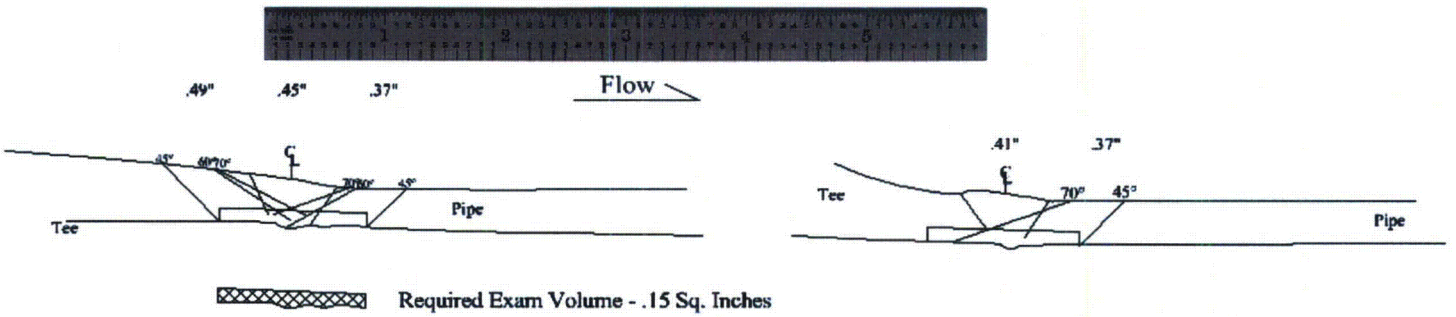
Coverage Summary- Weld # 14"-RHR-2403-1

	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream Axial	Upstream Circ.	Downstream Axial	Downstream Circ.
45/60/70	62%	62%	62%	62%
70	21% (best effort)		21% (best effort)	
			Code Coverage Total	62%
		Best Effort Coverage (Max 25%) Total		10.0%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

14"-RHR-2403-1
Figure 13

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



Required Exam Volume - .15 Sq. Inches

Required Exam Volume - .40 Sq. Inches

Upstream Required Exam Volume .20 Sq. Inches

Volume Examined on Upstream side - .04 Sq. Inch
(Best Effort)

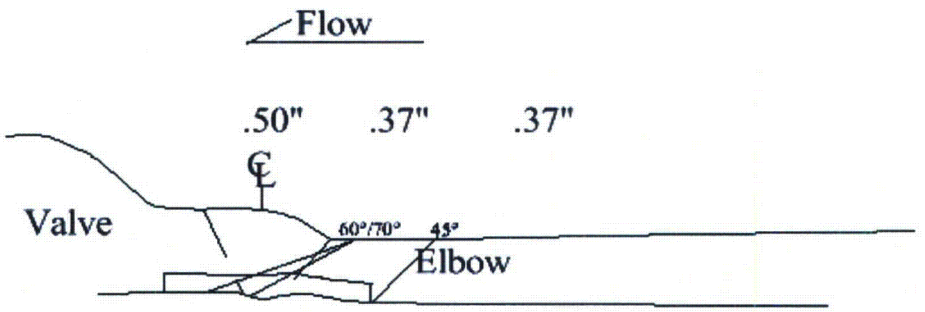
Examination Limited to Single side from 7" to 15" and 29 to 37" total 16"

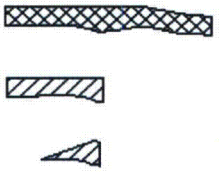
Examination Volume Dimensions: Length 43" x Width 1.24" x Height .12" Weld Thickness= .41" Weld Length= 43" Weld Width= .74"				
Coverage Summary- Weld # 14"-RHR-2403-2				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream-Circ.	Downstream Axial	Downstream Circ.
45/60/70	62%	62%	100%	100%
70	20% (best effort)			
			Code Coverage Total	81%
		Best Effort Coverage (Max 25%) Total		5.0%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

14"-RHR-2403-2
Figure 14

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0





Required Exam Volume - .15 Sq. Inches

Downstream Required Exam Volume .07 Sq. Inches

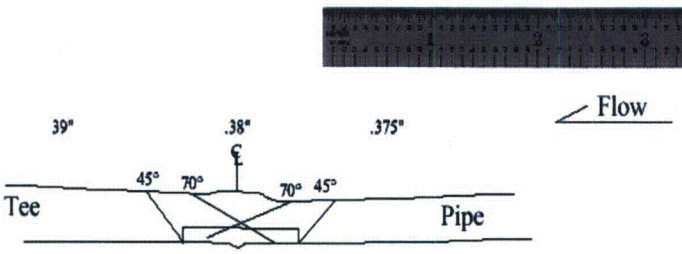
Volume Examined on Downstream side - .03 Sq. Inches
(Best Effort)

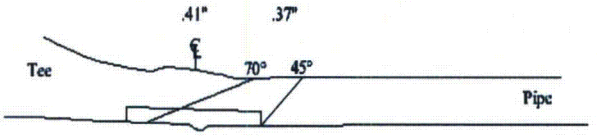
Examination Volume Dimensions: Length 44" x Width 1.38" x Height .12"				
Weld Thickness= .50" Weld Length= 44" Weld Width= .78"				
Coverage Summary- Weld # 14"-RHR-2403-4				
	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	**Upstream-Axial**	**Upstream- Circ.**	**Downstream Axial**	**Downstream Circ.**
45/60/70	100%	100%	0%	0%
70			42% (best effort)	
			Code Coverage Total	**50%**
		Best Effort Coverage (Max 25%) Total		**10.5%**

Notes:
1. **Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure**
2. **Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage**

14"-RHR-2403-4
Figure 15

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0





Required Exam Volume - .40 Sq. Inches

Required Exam Volume - .40 Sq. Inches

Downstream Required Exam Volume .20 Sq. Inches

Volume Examined on Downstream side - .04 Sq. Inches (Best Effort)

Examination Limited to Single side from 7" to 15" and 29 to 37" total 16"

Examination Volume Dimensions: Length 43" x Width 1.06" x Height .12"
Weld Thickness= .41" Weld Length= 43" Weld Width= .56"

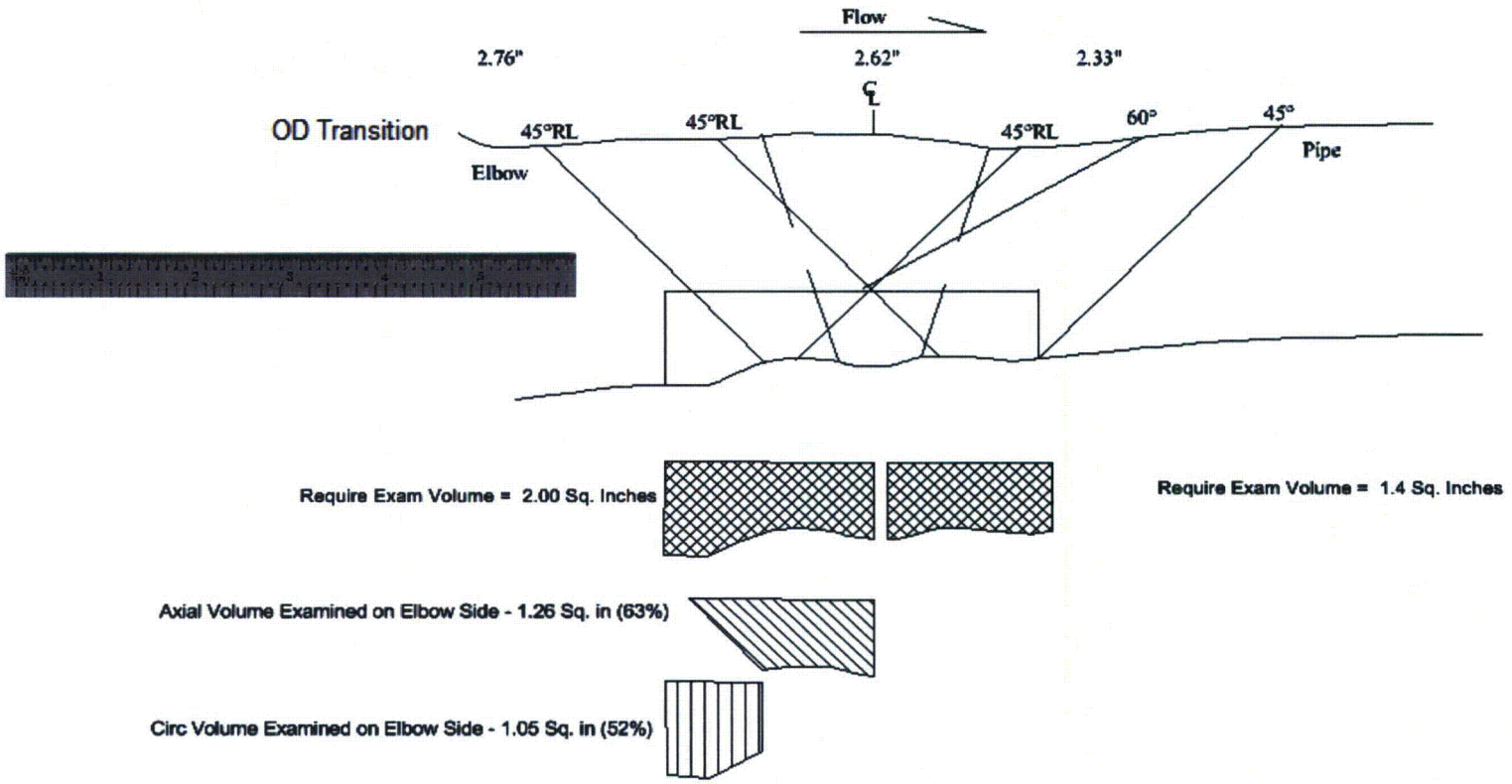
Coverage Summary- Weld # 14"-RHR-2404-17

	Required Scans- each has a weighing factor of 100% for complete coverage			
Angle	Upstream-Axial	Upstream- Circ.	Downstream Axial	Downstream Circ.
45/60/70	100%	100%	62%	62%
70/60 RL			20% (best effort)	
			Code Coverage Total	81%
		Best Effort Coverage (Max 25%) Total		5.0%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure
2. Best Effort Coverage refers to the required examination volume past the centerline that is examined in the axial beam direction with an Appendix VIII demonstrated procedure for single sided coverage

14"-RHR-2404-17
Figure 16

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



Examination Volume Dimensions: Length 97.3" x Width 3.95" x Height .91"

Weld Thickness = 2.62" Weld length = 97.3" Weld Width = 2.37"

Coverage Summary – 31"-RCS-1402-6

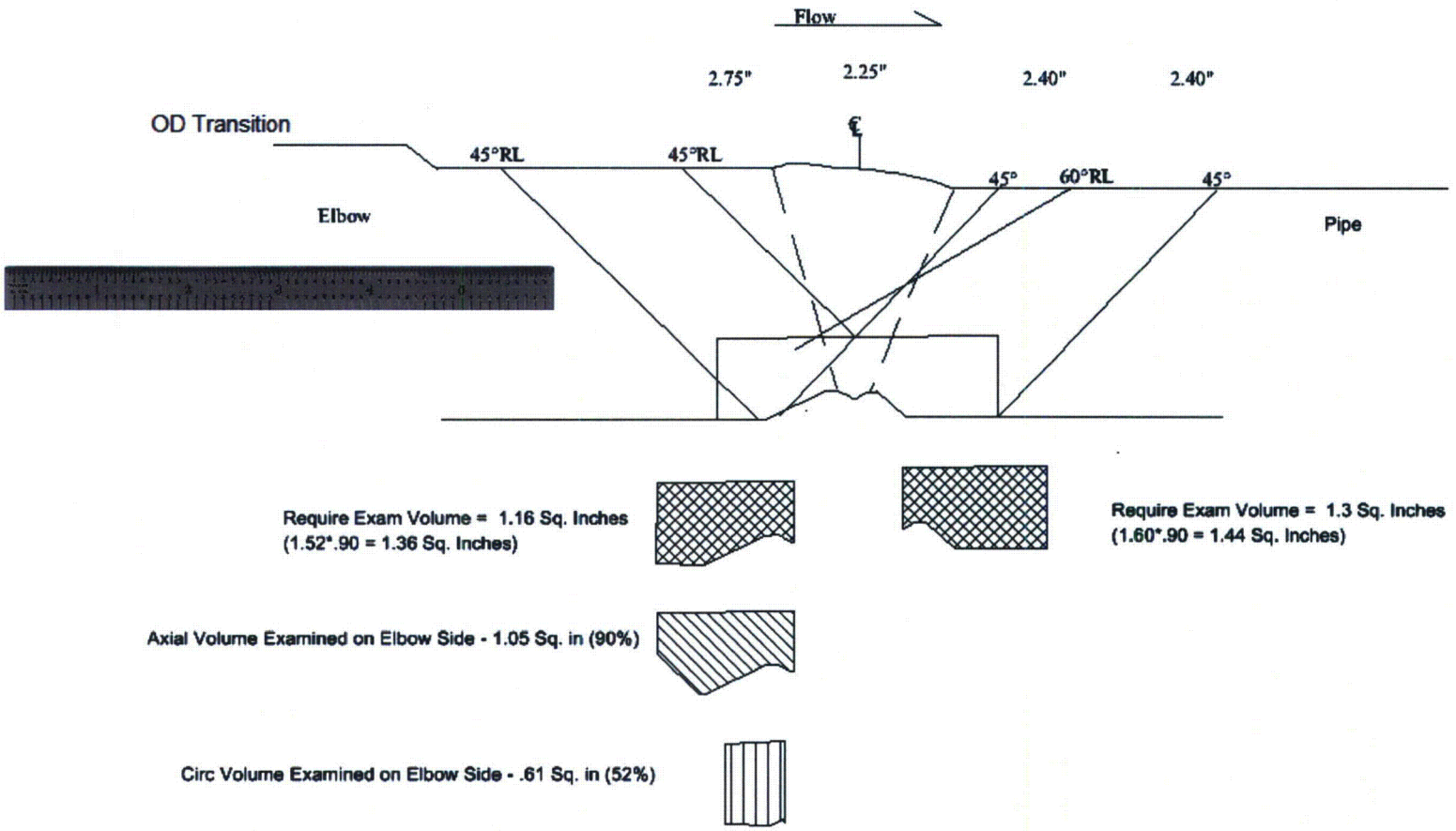
	Required Scans – each has a weighing factor of 100% for complete coverage			
Angle	Upstream - Axial	Upstream - Circ	Downstream - Axial	Downstream - Circ
45S/60S/45RL	0%	0%	100%	100%
45RL	63%	52%	0%	0%
			Code Coverage Total	78.75%

Notes:
1. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure.

31"-RCS- 1402-6

Figure 17

TURKEY POINT UNIT 4
FOURTH INSPECTION INTERVAL
RELIEF REQUEST NUMBER 17 REVISION 0



Examination Volume Dimensions: Length 97.3" x Width 1.51" x Height .90"				
Weld Thickness = 2.43" Weld length = 97.3" Weld Width = 2.10"				
Coverage Summary – 31"-RCS-1403-8				
	Required Scans – each has a weighing factor of 100% for complete coverage			
Angle	Upstream - Axial	Upstream - Circ	Downstream - Axial	Downstream - Circ
45S/60S/45RL	0%	0%	100%	100%
45RL	90%	52%	0%	0%
			Code Coverage Total	85.5%
Notes: 2. Code Coverage refers to the maximum percentage of the required examination volume that is effectively examined with the qualified examination procedure.				

31"-RCS- 1403-8

Figure 18