



JUL 08 2015

L-2015-172  
10 CFR 50.55a

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555-0001

RE: Turkey Point Unit 3 and Unit 4  
Docket Nos. 50-250 and 50-251  
Fourth 10-Year Inservice Inspection Interval  
Response to Request for Additional Information for Relief Request No. 15


By letter L-2015-020, dated February 13, 2013 (Agency-wide Documents Access and Management System (ADAMS), Accession No. ML15062A279), Florida Power & Light Company (FPL) submitted Relief Request (RR) No. 15, for the Fourth Inservice Inspection (ISI) Interval for Turkey Point Units 3 and 4, requesting relief from the volumetric examination coverage requirements of Section XI of the American Society of Mechanical Engineers Code (ASME Code, Section XI).

The Nuclear Regulatory Commission (NRC) Staff reviewed RR 15 and identified areas where they need additional information and clarification in order to complete their review. On June 4, 2015, Ms. Audrey Klett, NRC Project Manager for Turkey Point Units 3 and 4 provided the request for additional information (RAI) via electronic mail and requested the response to these RAI questions by July 10, 2015.

The enclosure to this letter contains the NRC's Request for Additional Information (RAI) questions for RR No. 15, and the corresponding FPL responses.

If there are any questions regarding this request, please contact Mr. Mitch Guth, Turkey Point Licensing Manager, at (305) 246-6698.

Sincerely,

  
Thomas Summers  
Site Vice-President  
Turkey Point Nuclear Plant

Enclosure

cc: Regional Administrator, Region II, USNRC  
Project Manager, NRR, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Nuclear Plant

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NRR



**FPL Letter L-2015-172**

**ENCLOSURE**

**Florida Power & Light Company**

**Turkey Point Units 3 and 4**

**Relief Request No. 15**

**Responses to NRC**

**Request for Additional Information (RAI)**

**Questions**



**NRC RAI-1a:**

On page 2 of Relief Request No. 15 (Attachment 1), the description for Examination Category B-A, Item B1.11 for the Reactor Pressure Vessel (RPV) Lower Shell to Lower Head Ring Weld (i.e., Weld 3-WR-31 for Unit 3 and Weld 4-WR-31 for Unit 4) states, "Figure 2 and 3 provides an illustration of the weld volume limitation due to the instrumentation tubes." It is further stated that, "The examination of the Figure IWB-2500-1 A-B-C-D volume is limited due to the proximity of the instrumentation tubes." However, Figures 2 and 3 of Relief Request No. 15 show limitations caused by the Core Support Lugs (or Core Guide Lugs). Clarify the limitations associated with the examinations for Welds 3-WR-31 and 4-WR-31 for Turkey Point 3 and 4. Also, clarify whether the Core Support Lugs are the same as the Core Guide Lugs.

**FPL Response to RAI-1a:**

The limitation referenced for 3-WR-31 and 4-WR-31 welds is a typo. The text should reference the limitation as Core Support Guide Lugs not instrumentation tubes. Figures 2 & 3 reference the correct limitation.

For clarification, Core Support Lugs are the same as the Core Guide Lugs.

**NRC RAI-1b:**

With respect to Figure 2 for Category B-A, Item B1.11, Lower Shell to Lower Head Ring Welds (Weld 3-WR-31 for Unit 3 and 4-WR-31 for Unit 4), provide the following information in a diagram showing: (1) the ASME Code, Section XI required examination volume, (2) the scan angles and axial distances of the search units from the welds used for the examination, and (3) the actual scanned volumes for both the axial and circumferential scan directions. Please refer to the industry/NRC information exchange public meeting held on January 13 -15, 2015 (ADAMS Accession Number ML15013A266), for a discussion of the NRC staff's expectations for the content of an inspection diagram (see Slide 12 for an example).

**FPL Response to RAI-1b:**

The following information is provided for the Category B-A, Item B1.11, Lower Shell to Lower Head Ring Welds (Weld 3-WR-31 for Unit 3 and 4-WR-31 for Unit 4):

- (1) The ASME Code, Section XI required examination volume is illustrated on pages 4 through 9 of this enclosure. The examination volume includes the weld and 1/2 "T" of the base material on each side of the weld for the complete through wall thickness.
- (2) The scan angles and axial distances of the search units from the welds used for the examination are provided on pages 4 through 9 of this enclosure. The search unit shown in the illustrations does not reflect the actual size of the UT head configuration. Refer to Figure 1 of the original relief request.
- (3) The actual scanned volumes for both axial and circumferential scan directions are located on page 3 of this enclosure.



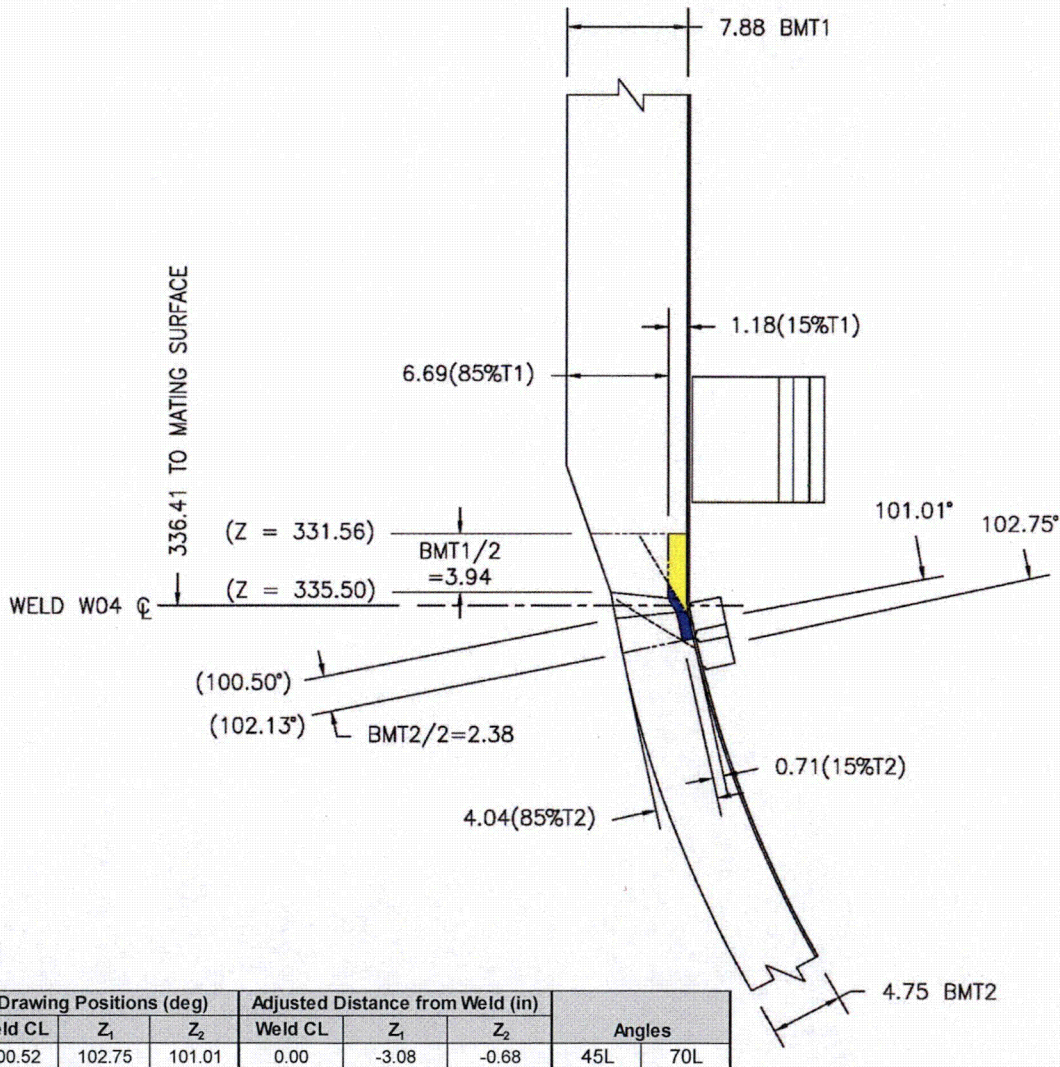
Turkey Point 3<sup>1</sup>  
ESTIMATED EXAMINATION COVERAGE FOR WELD: W04  
LOWER SHELL TO LOWER HEAD RING WELD  
Summary Number: 000400,  
Component ID: 3-WR-31  
Scan Plan Drawing Number: 8068905D Sheets 10 & 13,  
WELD VOLUME COVERAGE OBTAINED: 85%

Zone Coverage Obtained									
Inner 15%T: 76.7%		Outer 85%T: 86.8%		Aggregate: 85.2%					
Examination Volume Definition									
Weld Length: 497.942 in.									
Area Measurement (axial plane)				Volume Calculation					
Inner 15%T		6.38 sq. in.		Inner 15%T		3176.87 cu. in.			
Outer 85%T		32.80 sq. in.		Outer 85%T		16332.51 cu. in.			
Limitations		Limits scan by:					Compensation(s)		
Core Support Lugs		Restricts UT head movement					Single Sided scans		
Examination Coverage Calculations									
INNER 15%T									
Axial Beam Direction Coverages									
Entry #	Exam. Angle (deg.)	Beam Direction	Area Examined (sq. in.)	Length Examined (in.)	Volume Examined (cu. in.)	Volume Required (cu. in.)	Percent Examined	Limited	Comment
1	70L/45L	Up/Dn	6.38	353.40	2254.69	2254.69	100.0%	No	Coverage between lugs
2	70L/45L	Up/Dn	1.80	161.80	291.24	1032.28	28.2%	Yes	Coverage below lugs
Total Axial Coverage				515.20	2545.93	3286.98	77.5%		
Circumferential Beam Direction Coverages									
Entry #	Exam. Angle (deg.)	Beam Direction	Area Examined (sq. in.)	Circ Extent Examined (%)	Axial Extent Examined (%)		Percent Examined	Limited	Comment
3	70L/45L	CW/CCW	6.38	76.0%	100.0%		76.0%	No	Coverage between lugs
4	70L/45L	CW/CCW	0.00	0.0%	0.0%		0.0%	Yes	No coverage below lugs
Total Circ. Beam Direction Coverage:							76.0%		
Inner 15% coverage:							76.7%		
OUTER 85%T									
Axial Beam Direction Coverages									
Entry #	Exam. Angle (deg.)	Beam Direction	Area Examined (sq. in.)	Length Examined (in.)	Volume Examined (cu. in.)	Volume Required (cu. in.)	Percent Examined	Limited	Comment
1	45L/45S	Up/Dn	32.80	353.40	11591.52	11591.52	100.0%	No	Coverage between lugs
2	45L/45S	Up/Dn	21.84	161.80	3533.71	5307.04	66.6%	Yes	Coverage below lugs
Total Axial Coverage				515.20	15125.23	16898.56	89.5%		
Circumferential Beam Direction Coverages									
Entry #	Exam. Angle (deg.)	Beam Direction	Area Examined (sq. in.)	Circ Extent Examined (%)	Axial Extent Examined (%)		Percent Examined	Limited	Comment
3	45L/45S	CW/CCW	32.80	80.0%	100.0%		80.0%	No	Coverage between lugs
4	45L/45S	CW/CCW	6.56	20.0%	20.0%		4.0%	Yes	Coverage below lugs
Total Circ. Beam Direction Coverage:							84.0%		
Outer 85% coverage:							86.8%		

<sup>1</sup>Footnote: This is representative for Turkey Point Unit 4: Weld 4-WR-31



3-WR-31 and 4-WR-31



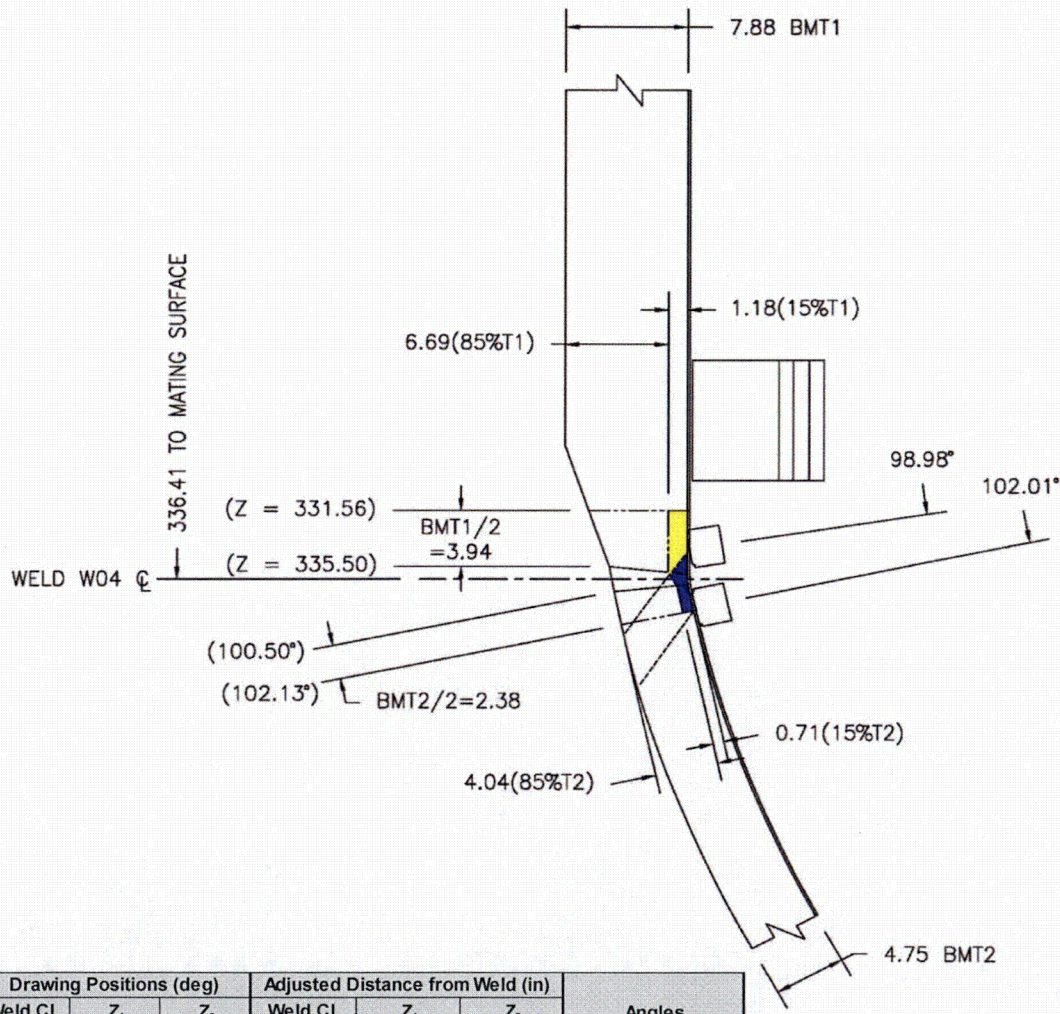
Z<sub>1</sub> is the lower vertical elevation of the two Z positions (excluding the weld center line (CL))  
Z<sub>2</sub> is the highest vertical elevation of the two Z positions (excluding the weld center line (CL))  
All measurements from Weld CL are surface distance.  
Motion on surface is ANGULAR (Alpha Motion on TWS).

ACTUAL COVERAGE  
MISSED VOLUME

15% – "UP" BELOW CORE LUGS



3-WR-31 and 4-WR-31



Drawing Positions (deg)			Adjusted Distance from Weld (in)			Angles	
Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	45L	70L
100.52	102.01	98.96	0.00	-2.06	2.15		

Z<sub>1</sub> is the lower vertical elevation of the two Z positions (excluding the weld center line (CL))  
Z<sub>2</sub> is the highest vertical elevation of the two Z positions (excluding the weld center line (CL))

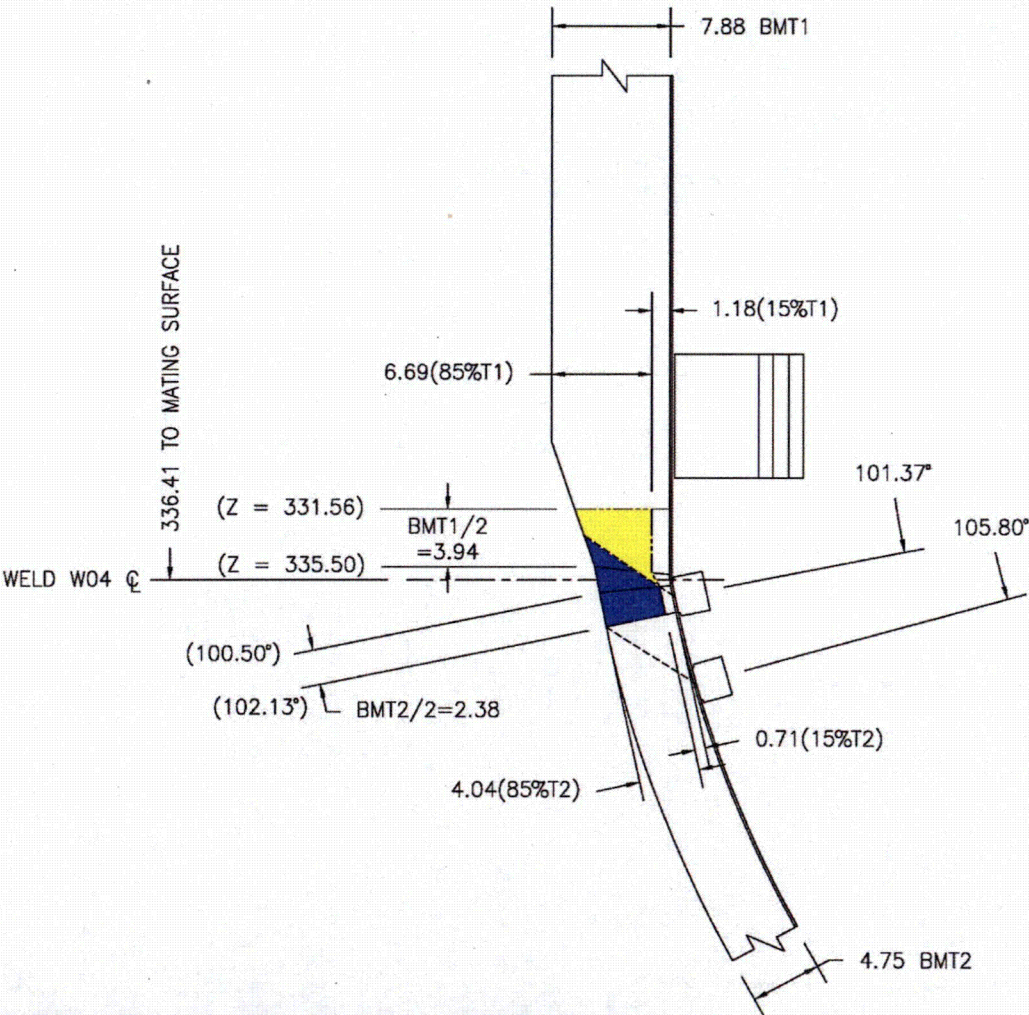
All measurements from Weld CL are surface distance.  
Motion on surface is ANGULAR (Alpha Motion on TWS).

ACTUAL COVERAGE  
MISSED VOLUME

15% - "DOWN" BELOW CORE LUGS





3-WR-31 and 4-WR-31



Drawing Positions (deg)			Adjusted Distance from Weld (in)			Angles	
Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	Weld CL	Z <sub>1</sub>	Z <sub>2</sub>		
100.52	105.80	101.37	0.00	-7.29	-1.17	45L	45S

Z<sub>1</sub> is the lower vertical elevation of the two Z positions (excluding the weld center line (CL))  
Z<sub>2</sub> is the highest vertical elevation of the two Z positions (excluding the weld center line (CL))

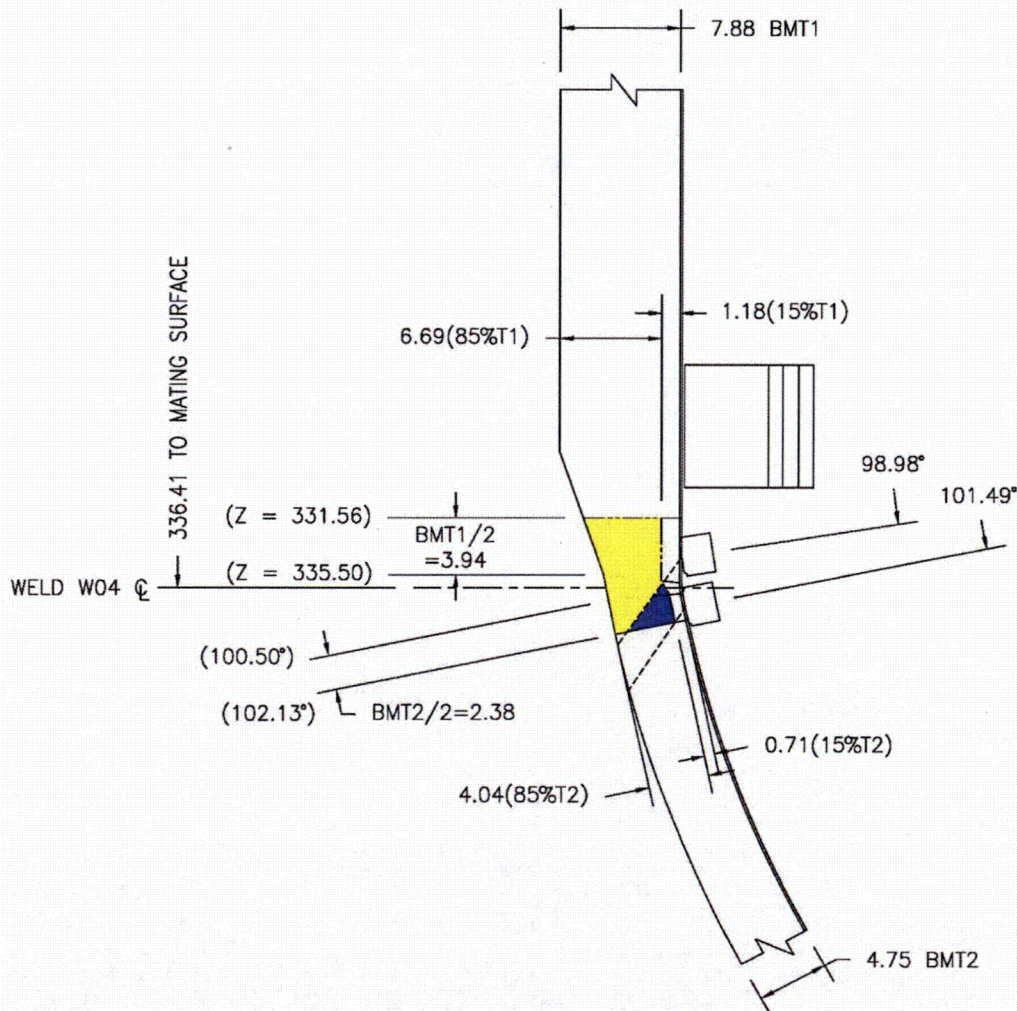
All measurements from Weld CL are surface distance.  
Motion on surface is ANGULAR (Alpha Motion on TWS).  
Lower Head radius 79.09" Conversion inches/° = 2π(79.09")/360° or 1.38 in/deg.

 ACTUAL COVERAGE  
 MISSED VOLUME

85% - "UP" BELOW CORE LUGS



### 3-WR-31 and 4-WR-31



Drawing Positions (deg)			Adjusted Distance from Weld (in)			Angles	
Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	Weld CL	Z <sub>1</sub>	Z <sub>2</sub>		
100.52	101.49	98.98	0.00	-1.34	2.13	45L	45S

Z<sub>1</sub> is the lower vertical elevation of the two Z positions (excluding the weld center line (CL))  
Z<sub>2</sub> is the highest vertical elevation of the two Z positions (excluding the weld center line (CL))

All measurements from Weld CL are surface distance.  
Motion on surface is ANGULAR (Alpha Motion on TWS).

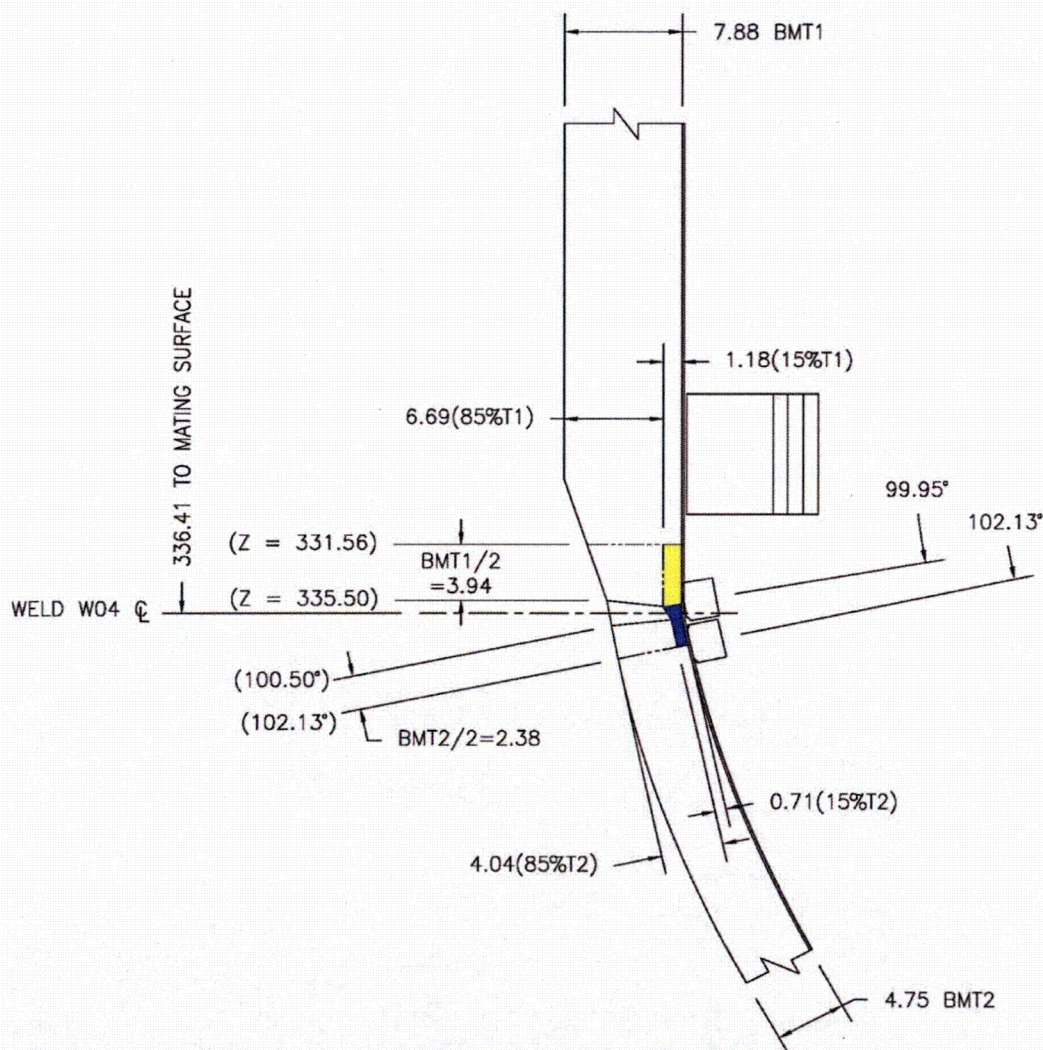
Lower Head radius 79.09" Conversion inches/° =  $2\pi(79.09'')/360^\circ$  or 1.38 in/deg.

ACTUAL COVERAGE  
 MISSED VOLUME



85% - "DOWN" BELOW CORE LUGS



### 3-WR-31 and 4-WR-31



Drawing Positions (deg)			Adjusted Distance from Weld (in)			Angles	
Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	45L	70L
100.52	102.13	99.95	0.00	-2.22	0.79	45L	70L

 ACTUAL COVERAGE  
 MISSED VOLUME

Z<sub>1</sub> is the lower vertical elevation of the two Z positions (excluding the weld center line (CL))  
 Z<sub>2</sub> is the highest vertical elevation of the two Z positions (excluding the weld center line (CL))

All measurements from Weld CL are surface distance.

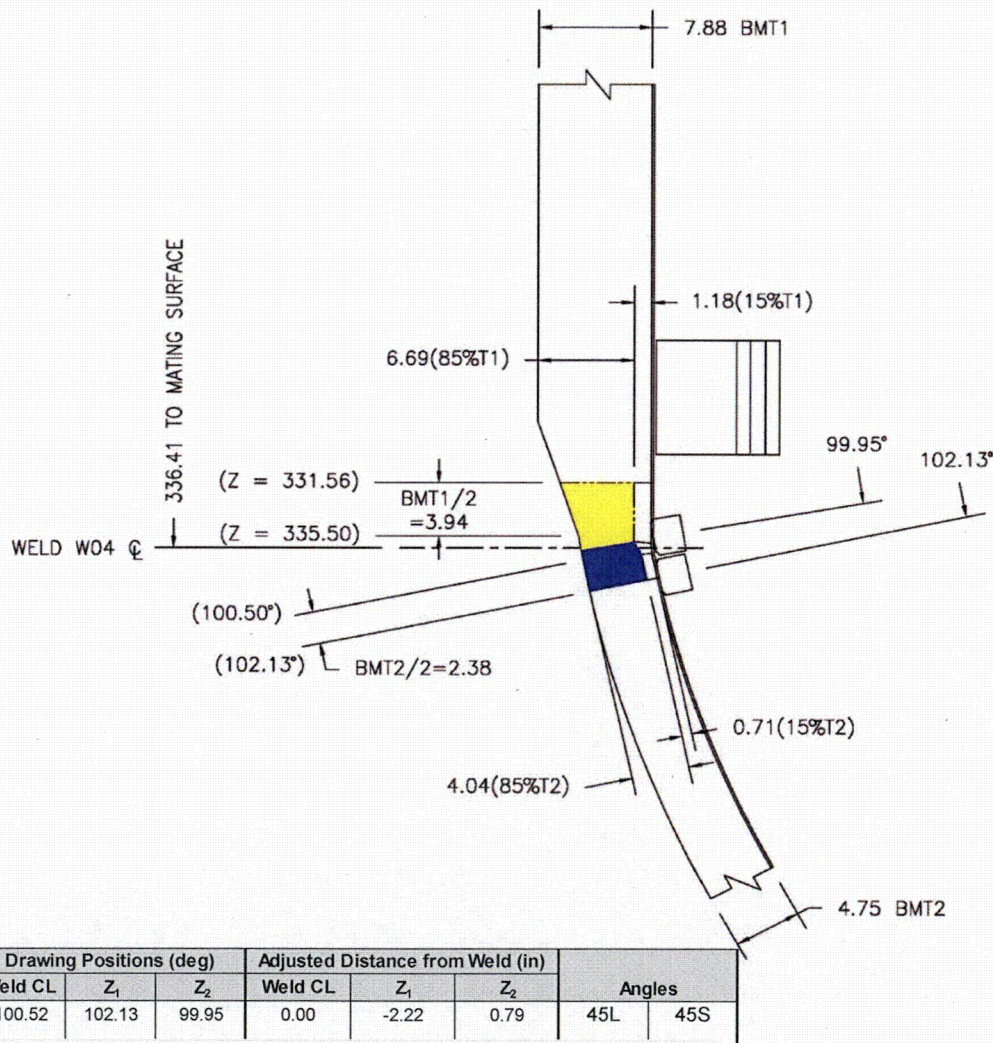
Motion on surface is ANGULAR (Alpha Motion on TWS).

Lower Head radius 79.09" Conversion inches/r° =  $2\pi(79.09'')/360^\circ$  or 1.38 in/deg.

15% - "CW/CCW" BELOW CORE LUGS



### 3-WR-31 and 4-WR-31



Drawing Positions (deg)			Adjusted Distance from Weld (in)			Angles	
Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	Weld CL	Z <sub>1</sub>	Z <sub>2</sub>		
100.52	102.13	99.95	0.00	-2.22	0.79	45L	45S

Z<sub>1</sub> is the lower vertical elevation of the two Z positions (excluding the weld center line (CL))  
Z<sub>2</sub> is the highest vertical elevation of the two Z positions (excluding the weld center line (CL))

ACTUAL COVERAGE  
 MISSED VOLUME

85% - "CW/CCW" BELOW CORE LUGS



**NRC RAI-1c:**

With respect to Figure 5 for Category B-A, Item B1.30, Upper Shell to Flange Welds (Weld 3-WR-18 for Unit 3 and 4-WR-18 for Unit 4), provide the following information in a diagram showing: (1) the ASME Code, Section XI required examination volume, (2) the scan angles and axial distances of the search units from the welds used for the examination, and (3) the actual scanned volumes for both the axial and circumferential scan directions. Please refer to the industry/NRC information exchange public meeting held on January 13 -15, 2015 (ADAMS Accession Number ML15013A266), for a discussion of the NRC staff's expectations for the content of an inspection diagram (see Slide 12 for an example).

**FPL Response to RAI-1c:**

The following information is provided with respect to Figure 5 for Category B-A, Item B1.30, Upper Shell to Flange Welds (Weld 3-WR-18 for Unit 3 and 4-WR-18 for Unit 4):

- (1) The ASME Code, Section XI required examination volume is illustrated on pages 12 through 23 of this enclosure. The examination volume includes the weld and 1/2 "T" of the base material on each side of the weld for the complete through wall thickness.
- (2) The scan angles and axial distances of the search units from the welds used for the examination are located on the inspection diagrams on pages 12 through 23 of this enclosure. The search unit shown in the illustrations does not reflect the actual size of the UT head configuration. Refer to Figure 1 of the original relief request.
- (3) The actual scanned volumes for both axial and circumferential scan directions are located on page 11 of this enclosure.



**Turkey Point 3<sup>2</sup>**  
**ESTIMATED EXAMINATION COVERAGE FOR WELD: W01**  
**FLANGE TO UPPER SHELL WELD**

Summary Number: 000100

Component ID: 3-WR-18

Scan Plan Drawing Number: 8068905D Sheets 6 & 9

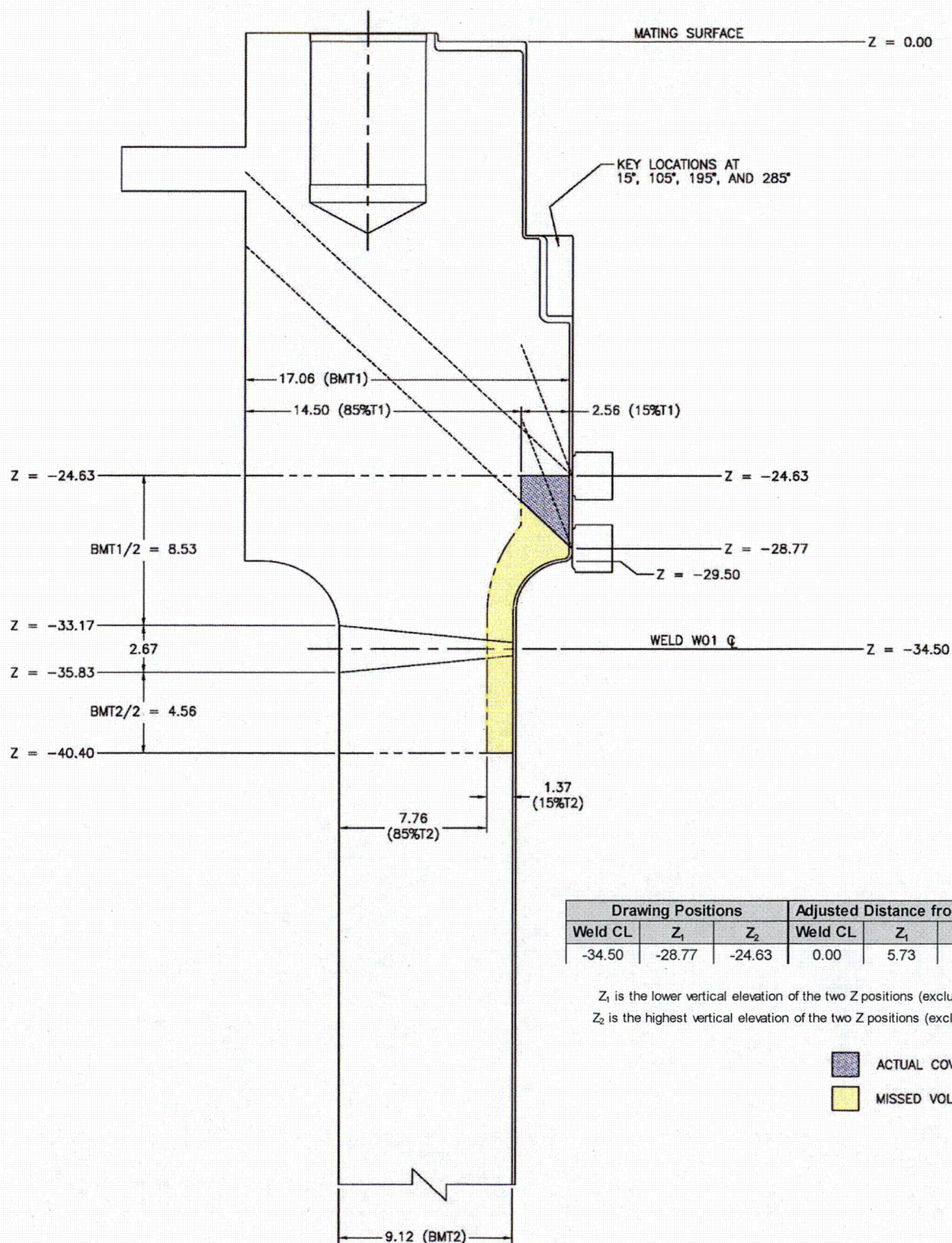
**WELD VOLUME COVERAGE OBTAINED: 75%**

Zone Coverage Obtained									
Inner 15%T: 81.5%		Outer 85%T: 74.4%				Aggregate: 75.5%			
Examination Volume Definition									
Weld Length: 489.49 in.									
Area Measurement (axial plane)					Volume Calculation				
Inner 15%T		29.21 sq. in.			Inner 15%T		14298.05 cu. in.		
Outer 85%T		157.90 sq. in.			Outer 85%T		77290.72 cu. in.		
Limitations		Limits scan by:						Compensation(s)	
Keyways and Irradiation slots. Flange Radius @ID above weld.		Slight reduction in axial and circ scan directions above weld due to interference with keyways and slots at 15°,105°, 195°, 285°, 70°, 80°, 90°, 130°,190°, 310°, 320°, 330° and flange radius 360°						Used single sided scans	
Examination Coverage Calculations									
INNER 15%T									
Axial Beam Direction Coverages									
Entry #	Exam. Angle (deg.)	Beam Direction	Area Examined (sq. in.)	Length Examined (in.)	Volume Examined (cu. in.)	Volume Required (cu. in.)	Percent Examined	Limited	Limitations
1	70L/45L	Up/Down	10.38	489.49	5080.92	14298.05	35.5%	Yes	Scan from below flange radius
2	70L/45L	Up/Down	13.80	384.62	5307.80	11234.84	47.2%	Yes	Scan from above flange radius
Total Axial Coverage					12697.26	14614.89	86.9%		
Circumferential Beam Direction Coverages									
Entry #	Exam. Angle (deg.)	Beam Direction	Area Examined (sq. in.)	Length Examined (in.)	Volume Examined (cu. in.)	Volume Required (cu. in.)	Percent Examined	Limited	Comment
3	70L/45L	CW/CCW	9.17	489.49	4488.64	14298.05	31.4%	Yes	Scan from below flange radius
4	70L/45L	CW/CCW	12.86	391.79	5038.39	11234.84	44.8%	Yes	Scan from above flange radius
Total Circ. Beam Direction Coverage							76.2%		
Inner 15% coverage:							81.5%		
OUTER 85%T									
Axial Beam Direction Coverages									
Entry #	Exam. Angle (deg.)	Beam Direction	Area Examined (sq. in.)	Length Examined (in.)	Volume Examined (cu. in.)	Volume Required (cu. in.)	Percent Examined	Limited	Limitations
1	45L/45S	Up	87.64	489.49	42899.04	77290.72	55.5%	Yes	Scan from below flange radius
2	45L/45S	Down	51.98	384.62	19992.71	60731.99	32.9%	Yes	Scan from above flange radius
3	45L/45S	Down	43.51	49.61	2158.53	60731.99	3.6%	Yes	Scan from above flange radius
Total Axial Coverage					65050.28	198754.69	92.0%		
Circumferential Beam Direction Coverages									
Entry #	Exam. Angle (deg.)	Beam Direction	Area Examined (sq. in.)	Length Examined (in.)	Volume Examined (cu. in.)	Volume Required (cu. in.)	Percent Examined	Limited	Comment
4	45L/45S	CW/CCW	53.41	489.49	26143.74	77290.72	33.8%	Yes	Scan from below flange radius
5	45L/45S	CW/CCW	45.33	391.79	17759.75	77290.72	23.0%	Yes	Scan from above flange radius
Total Circ. Beam Direction Coverage							56.8%		
Outer 85% coverage:							74.4%		

<sup>2</sup>This is representative for Turkey Point Unit 4: Weld 4-WR-18



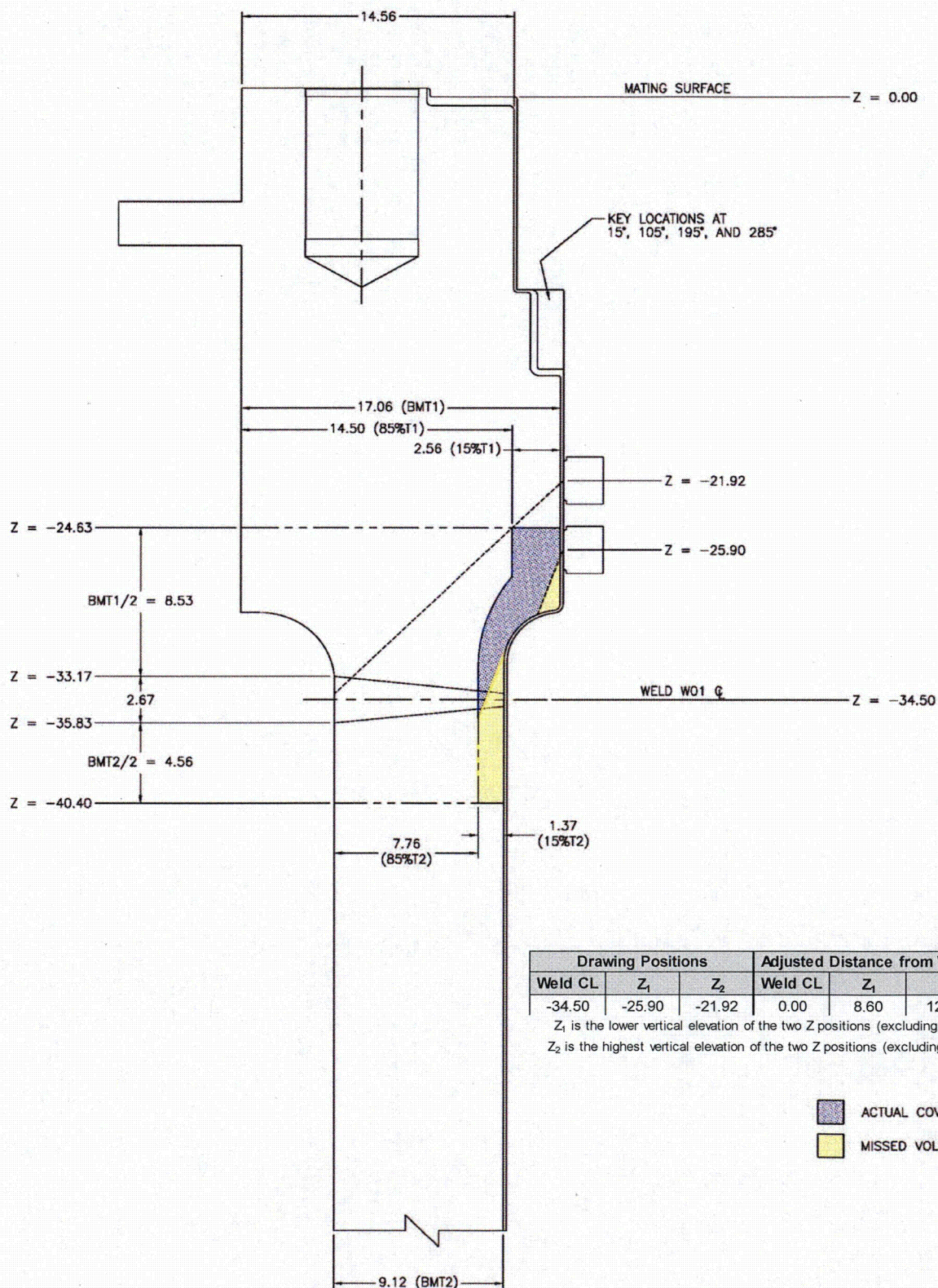
### 3-WR-18 and 4-WR-18



15% — "UP" UPPER FLANGE  
COVERAGE AT SLOTS (8) — NOT SHOWN  
COVERAGE AT KEYWAYS (4)



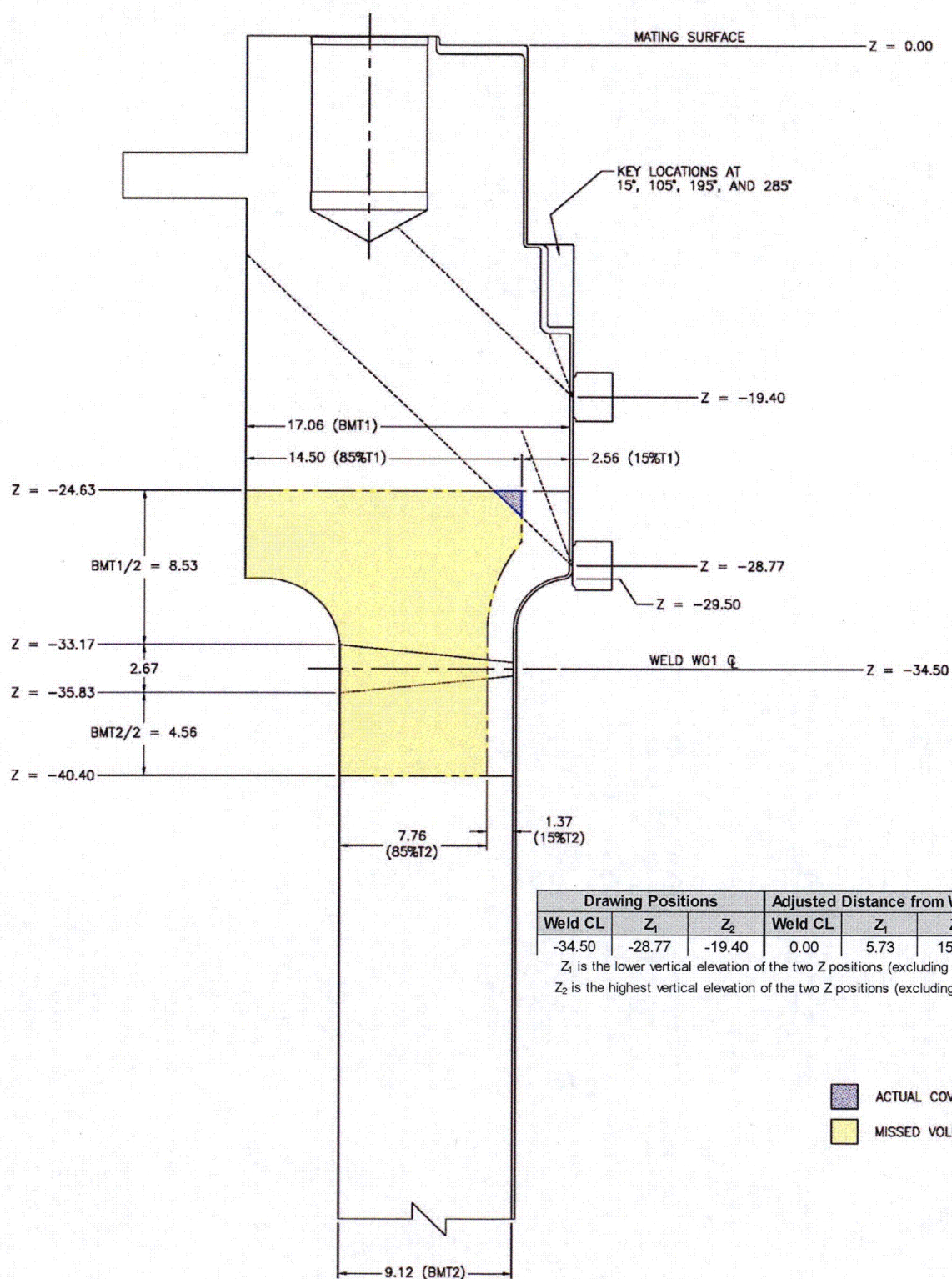
### 3-WR-18 and 4-WR-18



15% - "DOWN" UPPER FLANGE  
 COVERAGE AT SLOTS (8) NOT SHOWN  
 COVERAGE AT KEYWAYS (4)




### 3-WR-18 and 4-WR-18




Drawing Positions			Adjusted Distance from Weld			Angles	
Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	Weld CL	Z <sub>1</sub>	Z <sub>2</sub>		
-34.50	-28.77	-19.40	0.00	5.73	15.10	45L	45S

Z<sub>1</sub> is the lower vertical elevation of the two Z positions (excluding the weld center line (CL))

Z<sub>2</sub> is the highest vertical elevation of the two Z positions (excluding the weld center line (CL))

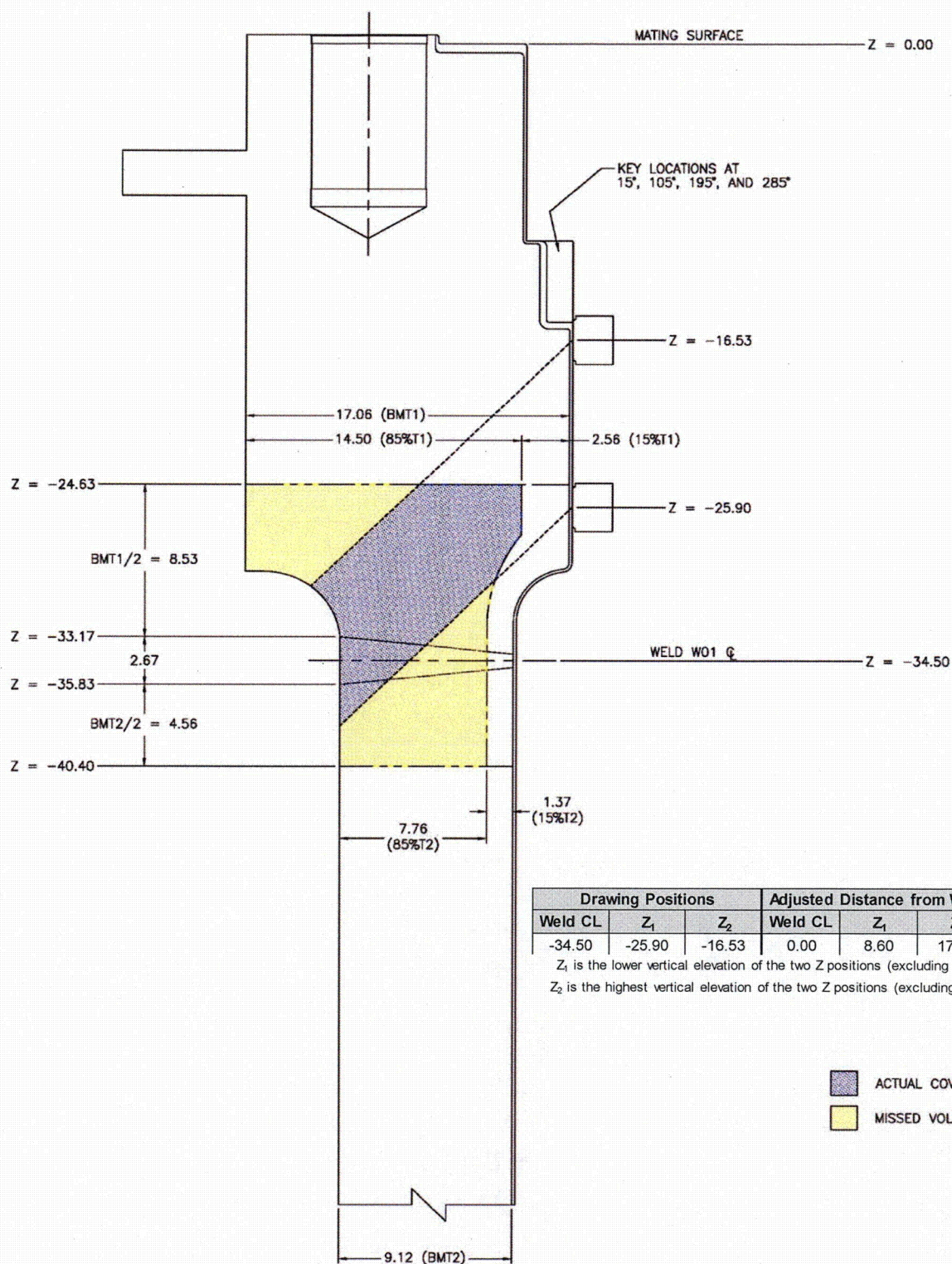
 ACTUAL COVERAGE

 MISSED VOLUME

85% — "UP" UPPER FLANGE  
COVERAGE AT SLOTS (8) — NOT SHOWN  
COVERAGE AT KEYWAYS (4)



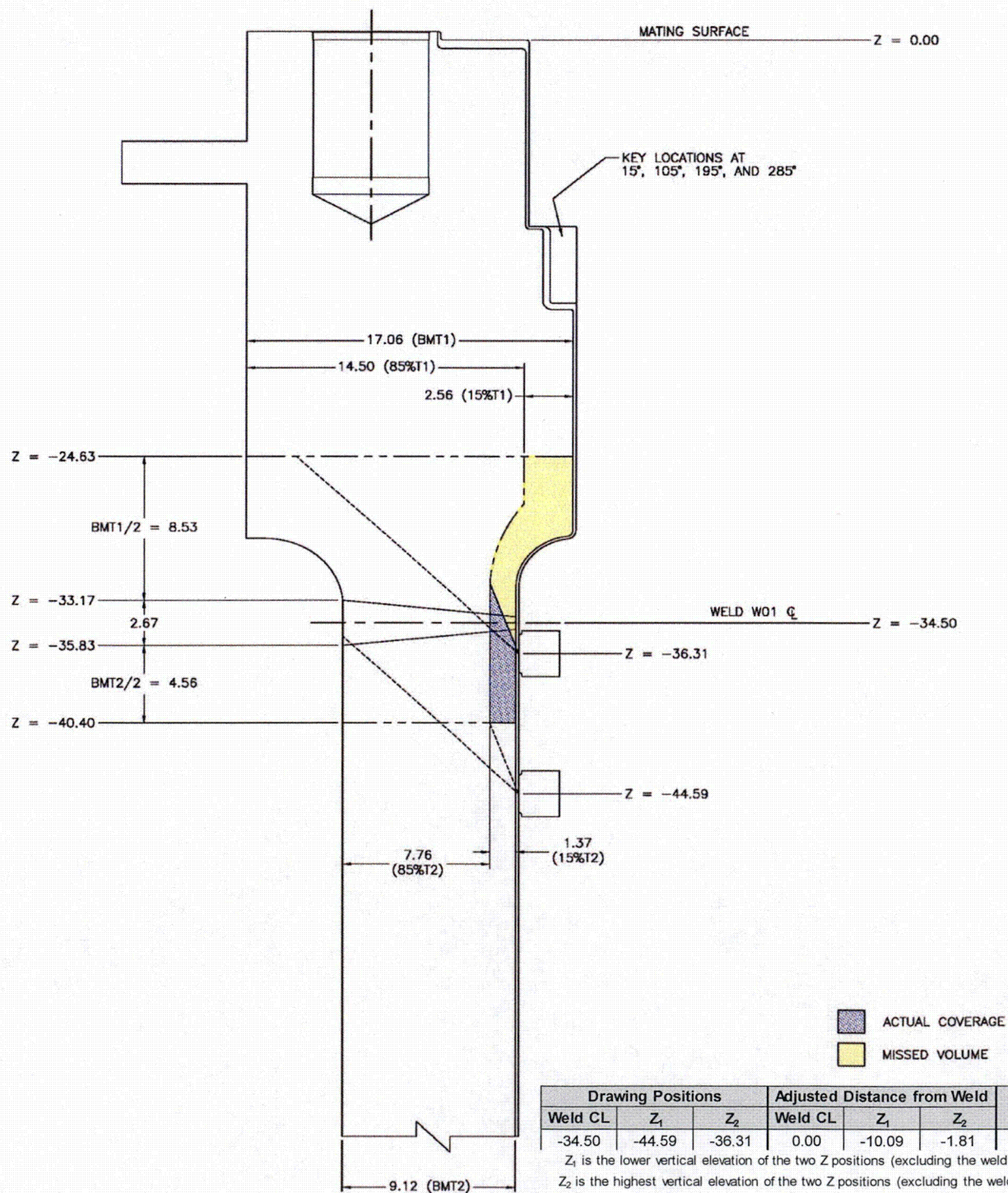
### 3-WR-18 and 4-WR-18



85% - "DOWN" UPPER FLANGE  
COVERAGE AT SLOTS (8) - NOT SHOWN  
COVERAGE AT KEYWAYS (4)



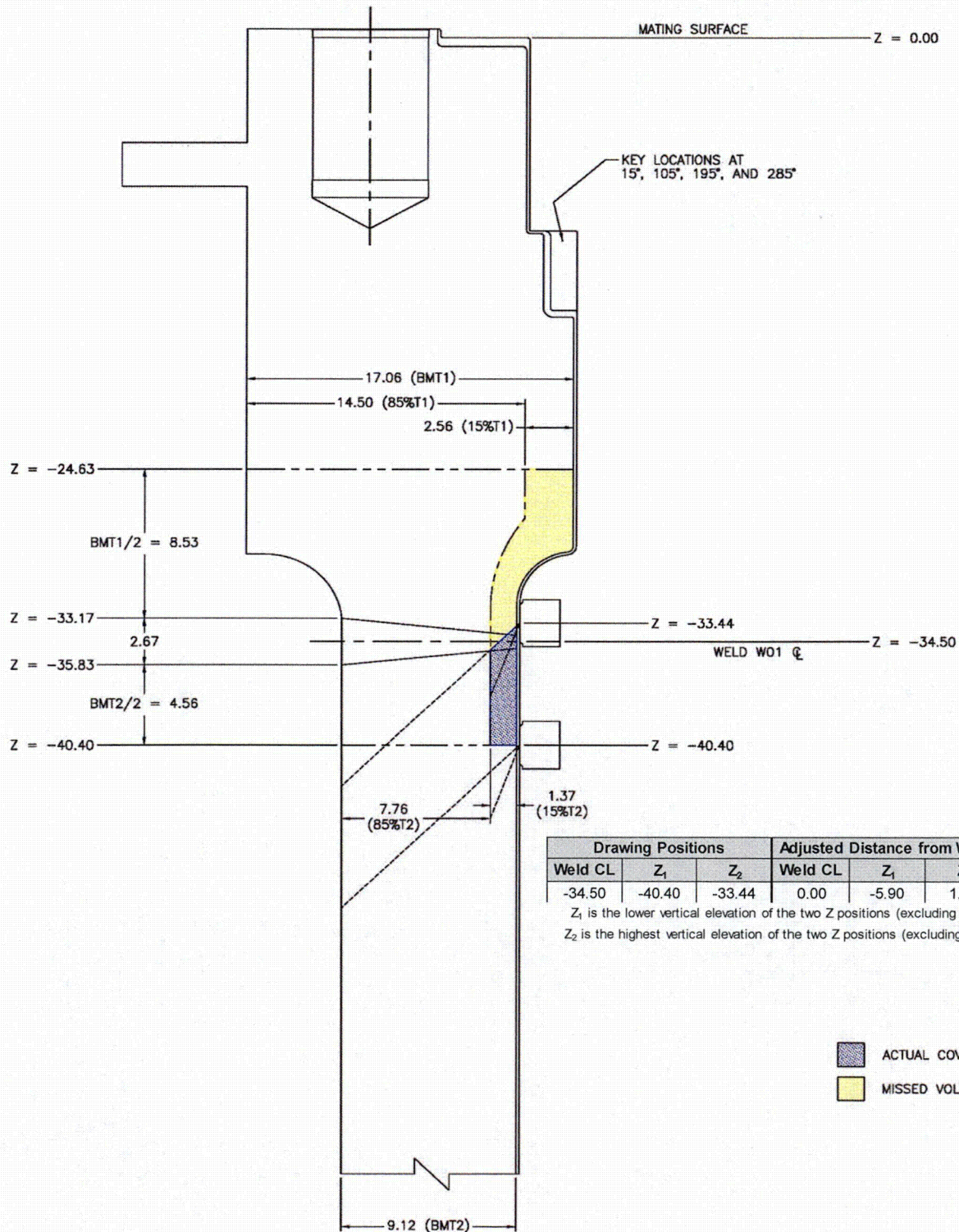
### 3-WR-18 and 4-WR-18



15% - "UP" LOWER FLANGE



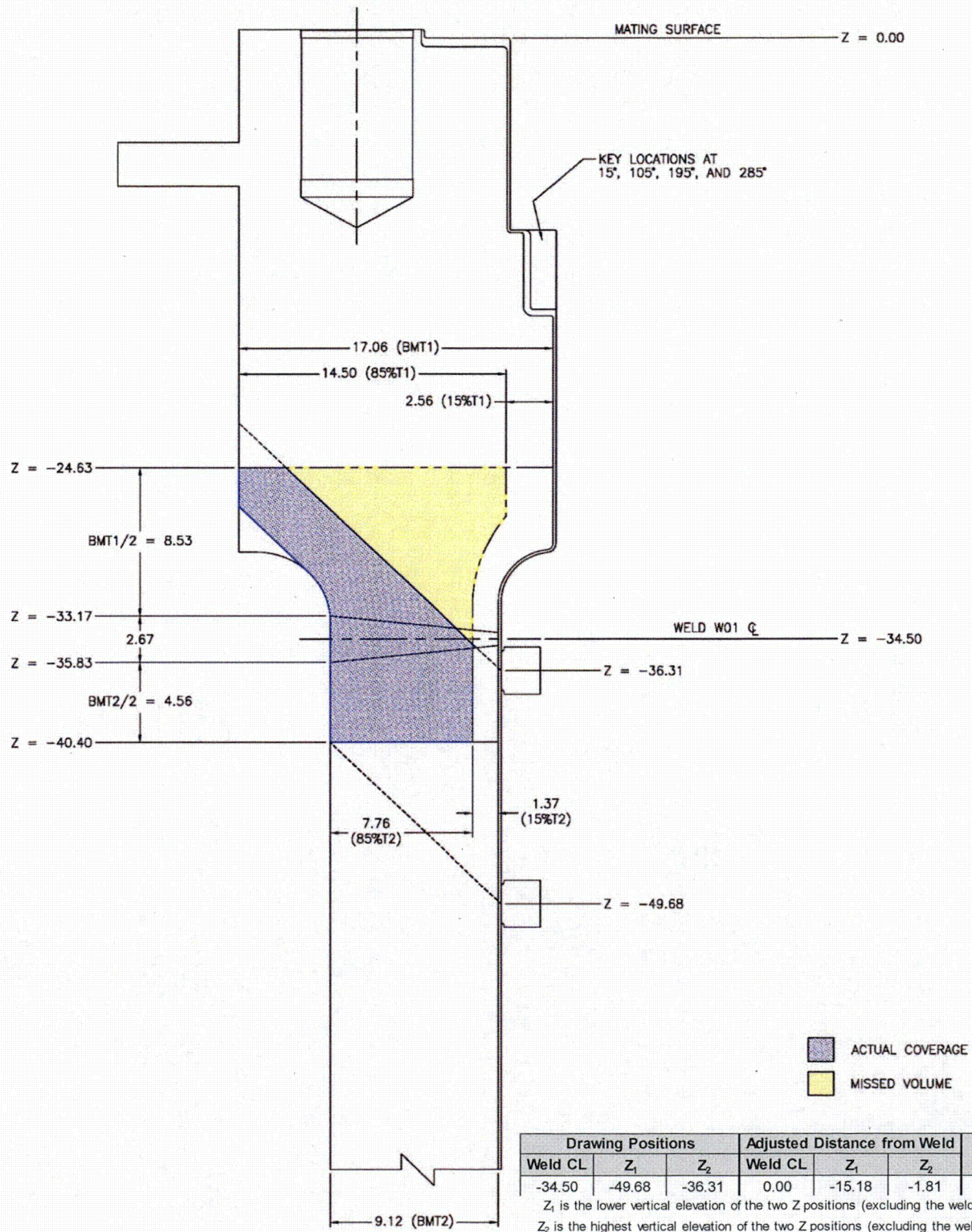
### 3-WR-18 and 4-WR-18



15% — "DOWN" LOWER FLANGE



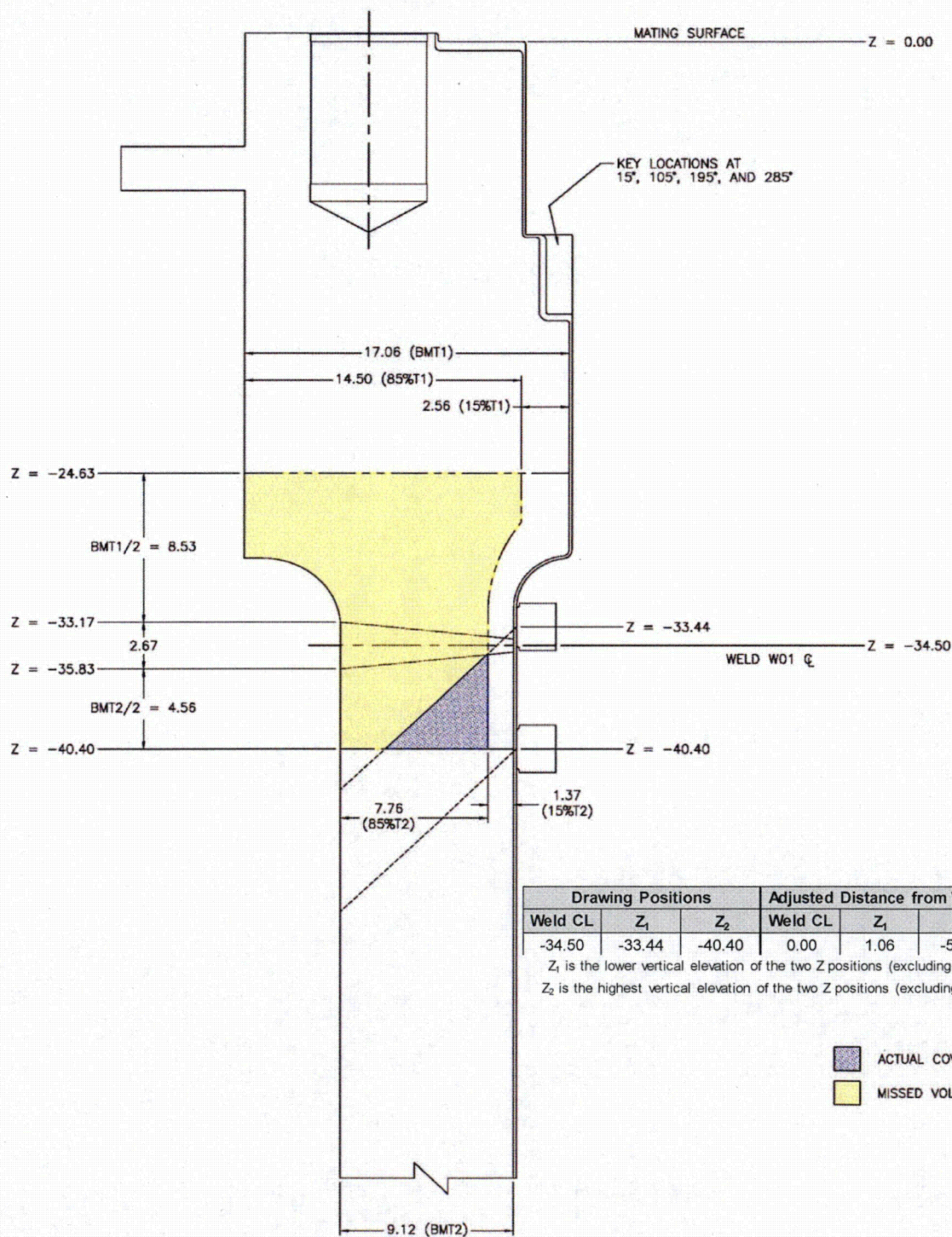
### 3-WR-18 and 4-WR-18



85% - "UP" LOWER FLANGE



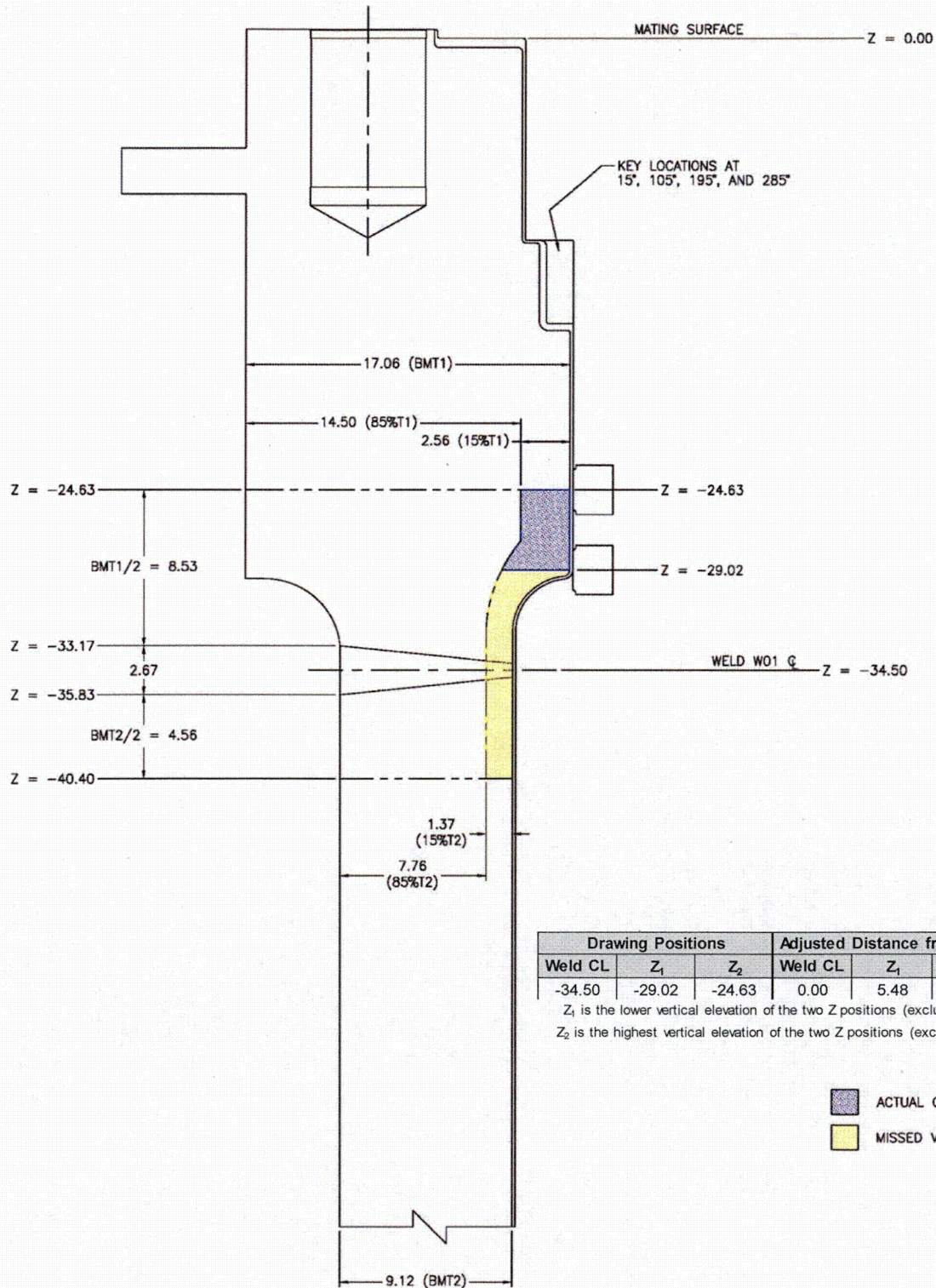
### 3-WR-18 and 4-WR-18



85% - "DOWN" LOWER FLANGE




### 3-WR-18 and 4-WR-18




Drawing Positions			Adjusted Distance from Weld			Angles	
Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	Weld CL	Z <sub>1</sub>	Z <sub>2</sub>	45L	70L
-34.50	-29.02	-24.63	0.00	5.48	9.87		

Z<sub>1</sub> is the lower vertical elevation of the two Z positions (excluding the weld center line (CL))

Z<sub>2</sub> is the highest vertical elevation of the two Z positions (excluding the weld center line (CL))

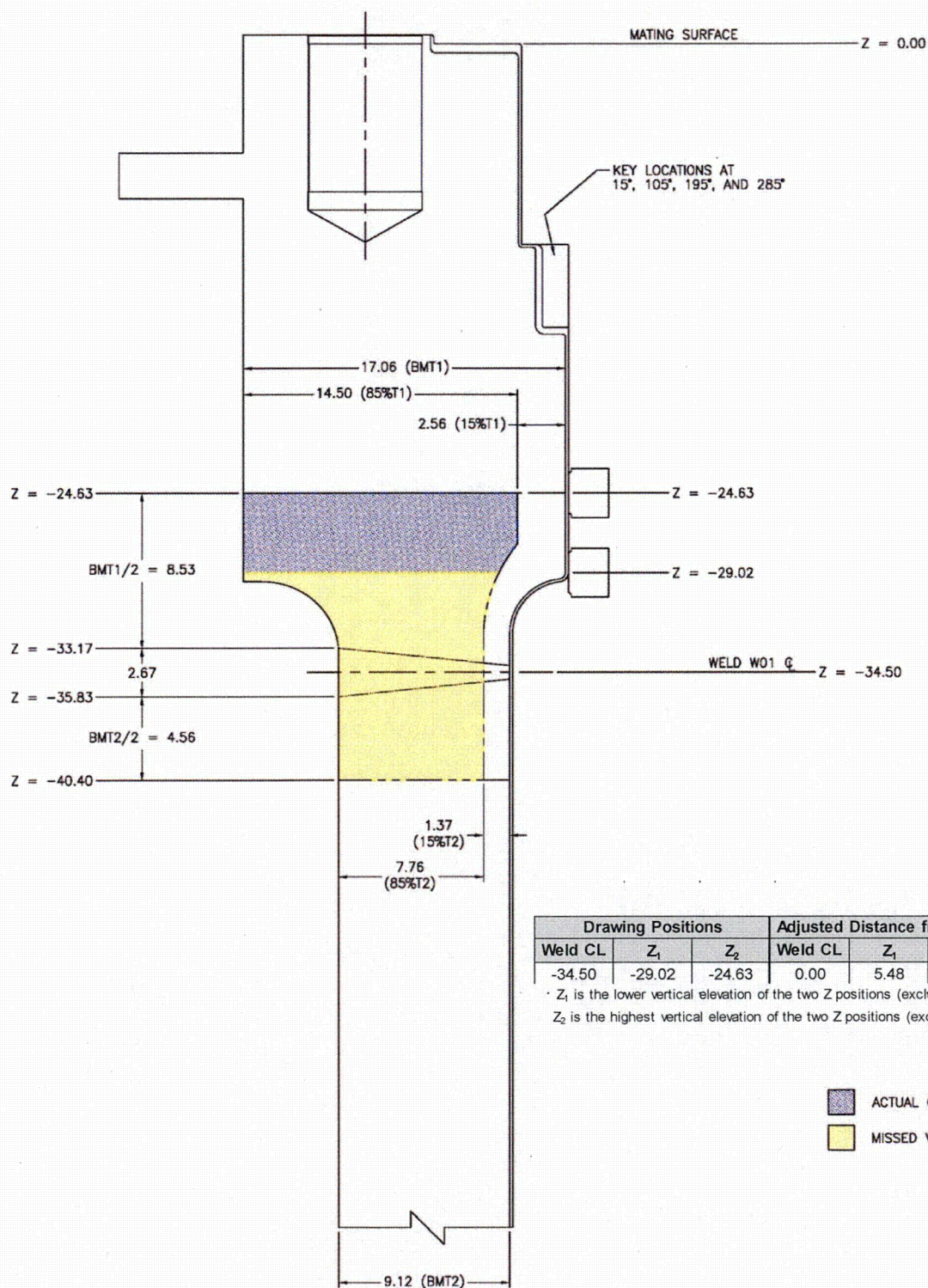
 ACTUAL COVERAGE

 MISSED VOLUME

15% — "CW/CCW" UPPER FLANGE  
COVERAGE AT SLOTS (8) — NOT SHOWN  
COVERAGE AT KEYWAYS (4)



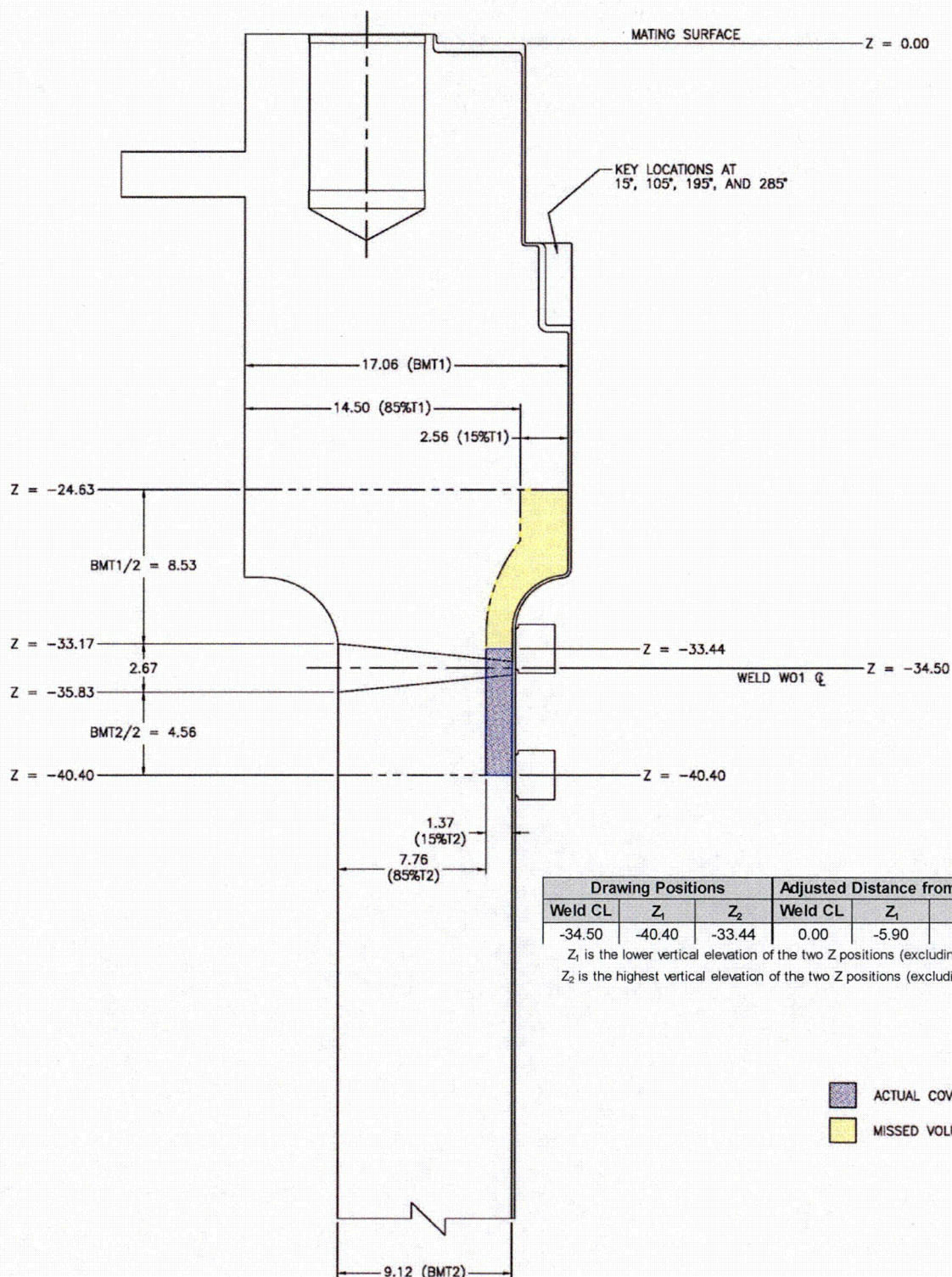
### 3-WR-18 and 4-WR-18



85% - "CW/CCW" UPPER FLANGE



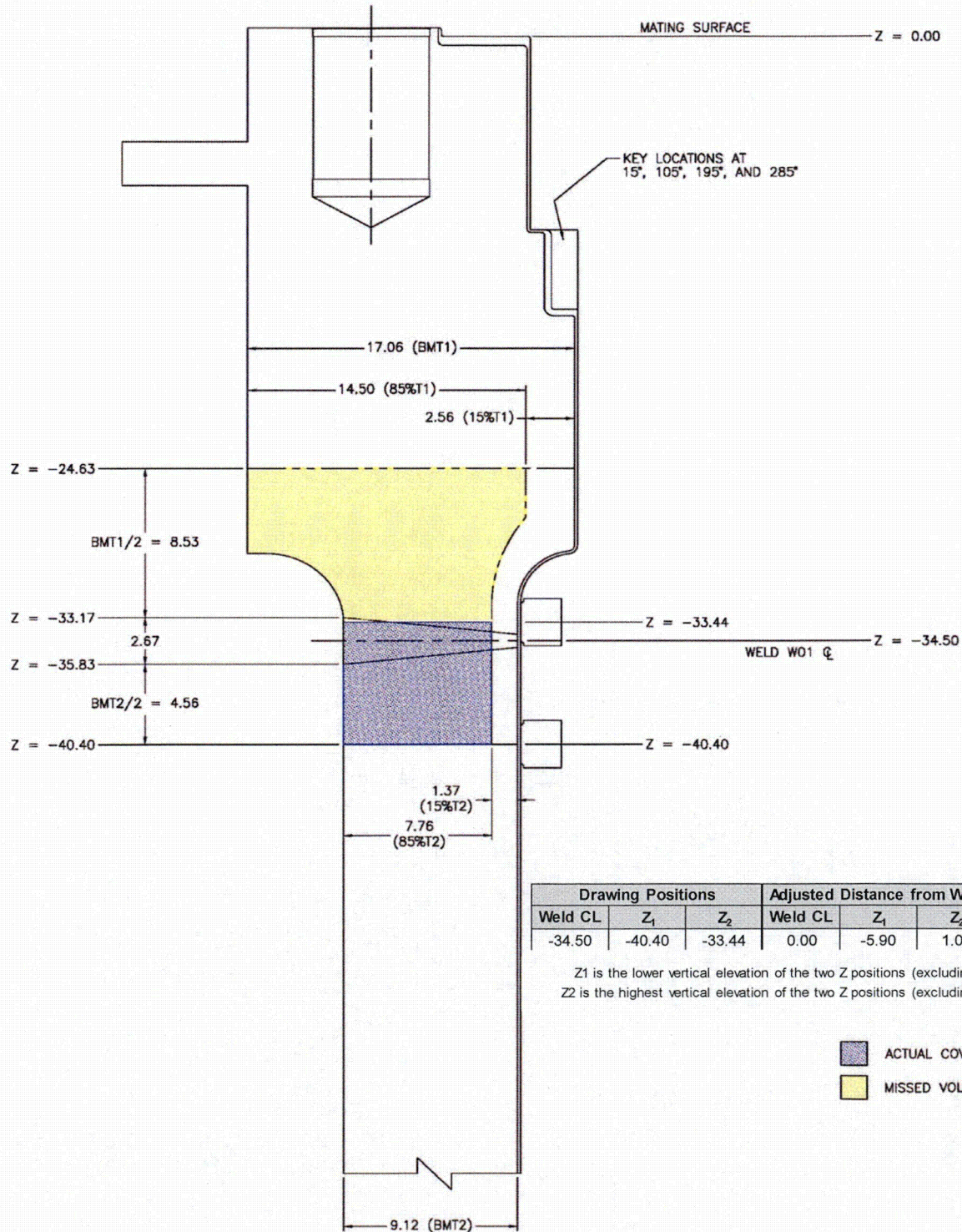
### 3-WR-18 and 4-WR-18



15% - "CW/CCW" LOWER FLANGE



### 3-WR-18 and 4-WR-18



85% - "CW/CCW" LOWER FLANGE



### **NRC RAI-2a**

For the four subsurface fabrication flaws found in Examination Category B-A, Item B1.11, RPV Lower Shell to Lower Head Ring Weld No. 4-WR-31 for Unit 4, indicate whether the acceptance criteria in ASME Code, Section XI, Table IWB-3510-1, "Allowable Planar Flaws," were met.

### **FPL Response to RAI-2a**

The acceptance criteria in ASME Code, Section XI, Table IWB-3510-1, "Allowable Planar Flaws," were met.

### **NRC RAI-2b**

For the three subsurface fabrication flaws found in Examination Category B-A, Item B1.30, RPV Upper Shell-to-Flange Weld No. 3-WR-18 for Unit 3, and the twelve subsurface fabrication flaws found in Examination Category B-A, Item B1.30, RPV Upper Shell-to-Flange Weld No. 4-WR-18 for Unit 4, indicate whether the acceptance criteria in ASME Code, Section XI, Table IWB-3510-1, "Allowable Planar Flaws," were met.

### **FPL Response to RAI2b:**

The acceptance criteria in ASME Code, Section XI, Table IWB-3510-1, "Allowable Planar Flaws," were met.

### **NRC RAI-3**

Confirm whether the licensee requested relief for the third ISI intervals for Turkey Point 3 and 4 from essentially 100 percent inspection coverage for Examination Category B-A, Item B1.11, RPV Lower Shell to Lower Head Ring Welds for either Units 3 or 4, given that the design configurations for these welds have not changed since the third ISI interval. If relief requests were not previously submitted, explain why.

### **FPL Response to RAI-3**

A relief request for welds 3-WR-31 (Unit 3) and 4-WR-4 (Unit 4) was not submitted in the third Interval. The process previously used to calculate the code volume coverage achieved during the 3rd interval examinations for welds with both single-side and dual-side access has been refined over the past 10-years to a more conservative approach resulting in the Reactor Pressure Vessel (RPV) Lower Shell to Lower Head Ring Welds examination coverage being reduced. The same examination tool and volume examined did not change. Previously, the 3rd interval examination calculation of coverage results identified that the RPV Lower Shell to Lower Head Ring Weld examination achieved essentially 100% (greater than 90%) coverage and as such, there was no need to request relief. Based on lessons learned and the interpretation of the basis of regulations regarding this examination, a more conservative approach was implemented for the coverage calculations in the fourth interval. The fourth interval relief request reflects the expectations of 10 CFR 50.55a(b)(2)(xv)(G), as listed below, for the examination coverage requirements, which resulted in a reduction in the examination volume coverage claimed from that of the previous third interval.



50.55a(b)(2)(xv)(G)	(G) <i>Specimen set and qualification: Seventh provision.</i> When applying Supplement 4 to Appendix VIII, Supplement 6 to Appendix VIII, or combined Supplement 4 and Supplement 6 qualification, the following additional conditions must be used, and examination coverage must include:
50.55a(b)(2)(xv)(G)(1)	(1) The clad-to-base-metal-interface, including a minimum of 15 percent T (measured from the clad-to-base-metal-interface), must be examined from four orthogonal directions using procedures and personnel qualified in accordance with Supplement 4 to Appendix VIII.
50.55a(b)(2)(xv)(G)(2)	(2) If the clad-to-base-metal-interface procedure demonstrates detectability of flaws with a tilt angle relative to the weld centerline of at least 45 degrees, the remainder of the examination volume is considered fully examined if coverage is obtained in one parallel and one perpendicular direction. This must be accomplished using a procedure and personnel qualified for single-side examination in accordance with Supplement 6. Subsequent examinations of this volume may be performed using examination techniques qualified for a tilt angle of at least 10 degrees.

#### **NRC RAI-4**

With respect to the subsurface indications detected in Welds 3-WR-18 and 4-WR-18 that were identified as fabrication-related defects during the fourth ISI interval examinations, explain why similar indications were not recorded during the previous (third) ISI interval.

#### **FPL Response to RAI-4**

The subsurface flaw indications identified during the fourth interval examination of welds 3-WR-18 and 4-WR-18 were compared directly to the third interval examination data using the analysis software and all flaws were found essentially unchanged from the previous examination. Although in some instances more flaw indications have been recorded during the fourth interval examination, it does not signify that the vessel flaw population is increasing. The qualified examination procedures allow some latitude on the conditions that must be met to record an indication such as detection with multiple beam angles or directions and amplitude response. Indications that don't meet these criteria do not have to be recorded. There are also instances where flaws very near the recording threshold were slightly below the threshold during the third interval examination. During the fourth interval examination, these flaws are at or slightly over the recording threshold due to slight variances between the examinations. In recent years, the approach taken in recording these flaws has become more conservative, and as such the flaw indications that meet only one of the criteria are documented for evaluation even though they may not be required to be recorded by the examination procedure. Although some of the indications do not necessarily meet all of the criteria for recording they meet at least one and have been recorded to more thoroughly document the condition of the vessel. This conservative approach results in the false appearance of a change in the vessel flaw population, when no changes have occurred.