Form H: Direct Examination Data Sheet - Page 1 of 10

DA/ILI	DA	ILI
Route Number:	**N-Segment:**	**ILI Log Distance:**
Examination Date: 11/13/2011	**IMA Number:**	**RMP-11 Ref. Section:** Table 5.6.2
Mile Point:		**Reference Girth Weld:**
Examination Performed By: DJ	**Region Number:**	**Distance From Girth Weld:**
PG&E Project Manager:	**Subregion # (ICDA):**	
Approved By:	**Stationing:**	
Order Number:		

Excavation Priority:

☐ Immediate ☐ Scheduled (For ILI - ☐ 1 Year ☐ Other)
☐ Monitor ☐ Effectiveness ☐ ICDA

Excavation Reason

☐ ECDA ☐ ILI ☐ Recoat
☐ ICDA ■ Other MAOP Validation

If practical, take P/S or CIS reads before excavation:

Excavation Details: Centerline on GPS Coordinates (Based on GIS):

Northing:
Easting:
Planned Inspection Length (Ft.):
Actual Inspection Length (Ft.):

Centerline on GPS Coordinates (Uncorrected Field Measurement):
Northing:
Easting:
GPS File Name:

Centerline on GPS Coordinates (Corrected Field Measurement):
Northing:
Easting:
Nominal Wall Thickness:
Nominal Pipe Diameter:

1.0 Data Before Coating Removal

1.1 Native Soil Type: ■ Clay ☐ Rock ☐ Sand ■ Loam ☐ Wet ☐ Other

1.1a Backfill Material Found ☐ Sand ☐ Slurry ■ Native
Depth of Cover (Ft.):
Comments:

1.2 Coating Type: ☐ HAA ■ Somastic ☐ Plastic Tape ☐ Wax Tape ☐ FBE ☐ Powercrete
☐ Bare/None ☐ Paint ☐ Other: Comments: Poor condition disbonded

Coating Thickness (Inches): 1/8" Number of Layers:

1.3 Holiday Testing Performed?: ☐ Yes ■ No Voltage Used: Map Location of Holidays Below.
Device Used: ☐ Coil ☐ Wet Sponge Comments:

1.4 Pipe-to-Soil Potentials in Ditch (-mV): Upstream 1190 mv Downstream 1190 mv
Comments:

1.5 Soil Resistivity in Ditch (Ω-cm):
Method: ☐ 4-Pin ■ Soil Box 5300 ohms

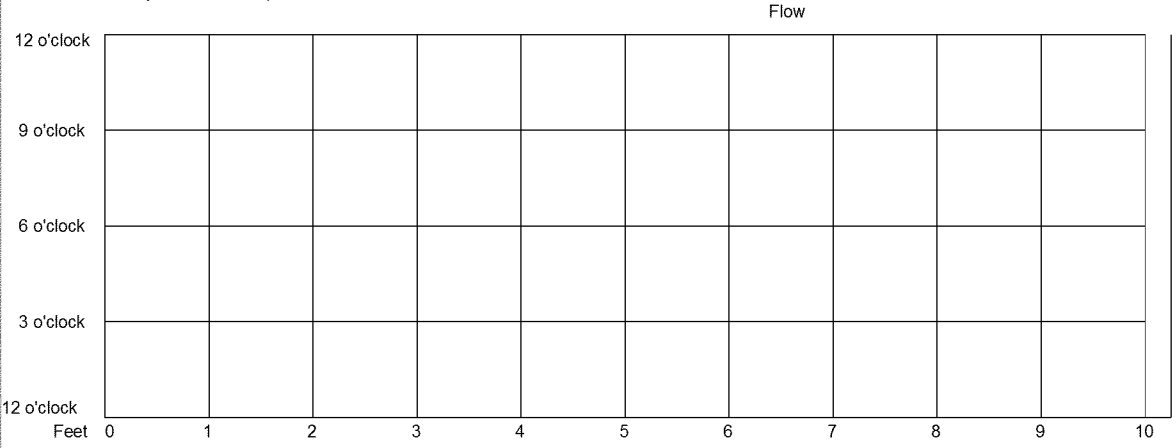
1.6 Soil Sample Location: Comments: D/S end

1.7 Ground Water Present?: ☐ Yes ■ No Sample(s) Collected?: ☐ Yes ☐ No Sample pH:
Comments:

1.8 Coating Condition: ☐ Good - Adhered to Pipe ☐ Fair - Coating Partially Disbonded or Degraded
■ Poor - Coating Significantly Disbonded or Missing

Comments: Coating disbonded and falling off with soil removal 100% over expossed pipe.

1.9 Map of Coating Degradation*: **Zero Reference Point:** edge of expossed pipe.
*Note any calcareous deposit locations



DA/ILI

Route Number:
Examination Date: 11/13/2011
Mile Point:
Examination Performed By: dj
PG&E Project Manager:
Approved By:
Order Number:

DA

N-Segment:
IMA Number:
Region Number:
Subregion # (ICDA):
Stationing:

ILI

ILI Log Distance:
RMP-11 Ref. Section: Table 5.6.2
Reference Girth Weld:
Distance From Girth Weld:

1.10 Photos Taken?*: [X] Yes [ ] No
*See Photo Log for additional information.

1.11 Coating Sample Taken?: [X] Yes [ ] No Location of Sample: D/S end

1.12 Liquid Underneath Coating?: [ ] Yes [X] No If Yes, pH of Liquid:

1.13 Corrosion Product Present?: [ ] Yes [X] No If Yes, Was Sample Taken?: [ ] Yes [X] No
Comments:

1.14 Soil pH (Sb Electrode): Upstream 6.5 Downstream 6.5

2.0 Data After Coating Removal

2.1 Pipe Temperature (°F): Measured Pipe Diameter (In.):

2.2 Weld Seam Type: [ ] DSAW [ ] SSAW [X] RW [ ] SMLS
[ ] Spiral [ ] Lap [ ] Flash [ ] AO Smith [ ]

2.3 Girth Weld Coordinates:
Northing:
Easting:
Elevation: LS Weld Clock Position:

2.4 Damage Found:
Corrosion Damage? [ ] Yes [X] No Mechanical Damage? [ ] Yes [X] No
Other Damage:

2.5 dj

TDC:	0.149"	1 O'clock:	0.149"	2 O'clock:	0.149"	3 O'clock:	0.149"	4 O'clock:	0.149"	5 O'clock:	0.149"
6 O'clock:	0.149"	7 O'clock:	0.149"	8 O'clock:	0.149"	9 O'clock:	0.149"	10 O'clock:	0.149"	11 O'clock:	0.149"

2.5a Nominal Wall Thickness: 0.148"

UT Wall Thickness Grid @ 6:00 is required. Be sure to attach grid to Form H electronically. See page 6 of 10.

2.6 Wet Fluorescent Mag. Part. Is Required. Comments: Two linear indications were noted please see MT report for locations.

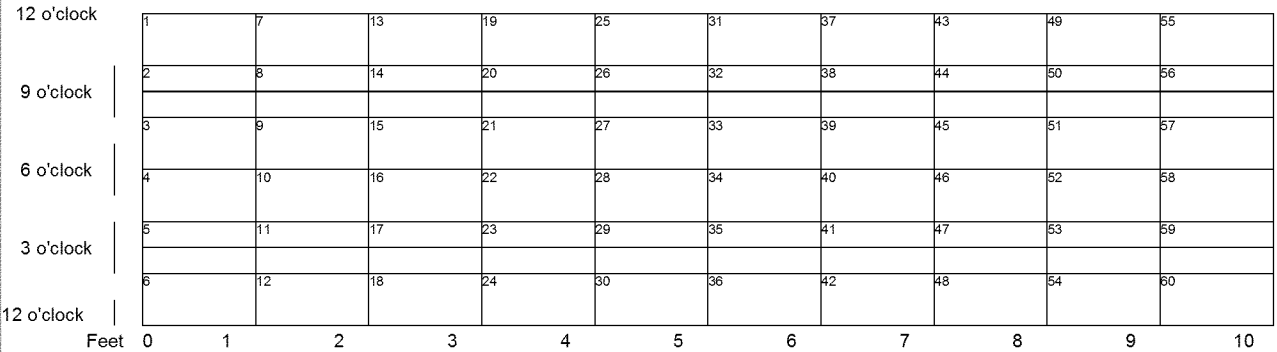
Were there any linear indications? [X] Yes [ ] No If Yes, attach NDE report electronically as part of the Form H. Report to include black light and white light photos of indications.

2.7 Take Photos to Document Corrosion and Other Anomalies*
*See Photo Log for additional information.

2.8 Overview Map of Corroded Area*:
*See Pit Depth Measurement Grid for additional Information
*Note any calcareous deposits.

Zero Reference Point: edge of exposed pipe.

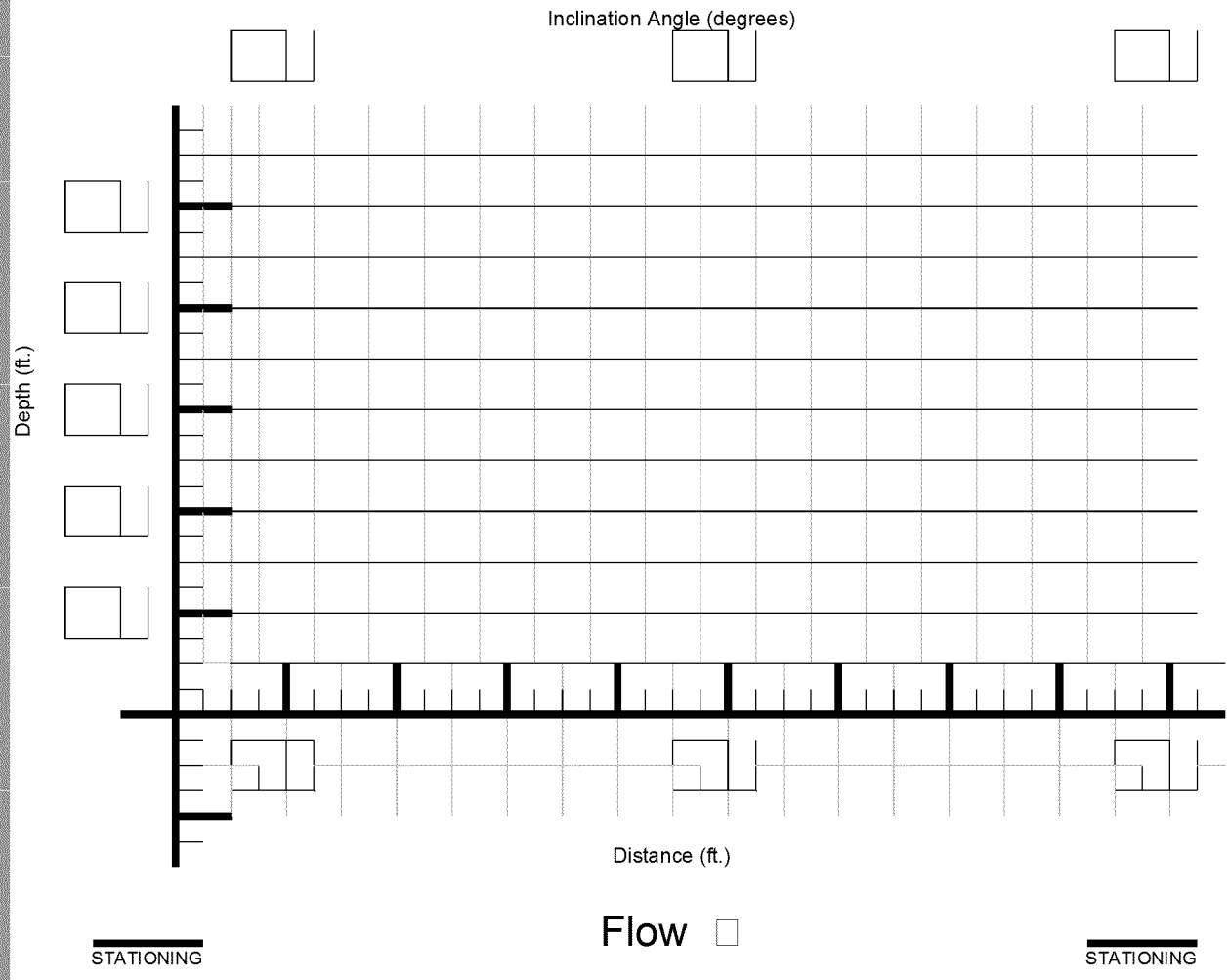
Flow



DA/ILI		DA		ILI	
Route Number:		N-Segment:		ILI Log Distance:	
Examination Date:	11/13/2011	IMA Number:		RMP-11 Ref. Section:	Table 5.6.2
Mile Point:				Reference Girth Weld:	
Examination Performed By:	dj	Region Number:		Distance From Girth Weld:	
PG&E Project Manager:		Subregion # (ICDA):			
Approved By:		Stationing:			
Order Number:					

Excavation Drawing:

At minimum draw pipe elevation profile and indicate stationing of 1) low point and 2) critical inclination angle.
Place an arrow on the drawing indicating direction of gas flow in the region(s). Other labels may also be added (e.g. "to Station").



NOTES: (Record stationing and names of nearby landmarks such as creeks and roads. Provide any additional information that may help in spatially positioning pipe):

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI

Route Number: _____
Examination Date: 11/13/2011
Mile Point: _____
Examination Performed By: d} _____
PG&E Project Manager: _____
Approved By: _____
Order Number: _____

DA

N-Segment: _____
IMA Number: _____
_____
Region Number: _____
Subregion # (ICDA): _____
Stationing: _____

ILI

ILI Log Distance: _____
RMP-11 Ref. Section: Table 5.6.2
Reference Girth Weld: _____
Distance From Girth Weld: _____

Grid Size = _____Inch x _____Inch (specify grid size)
Clock Position (specify below)

Anomaly #: _____ Grid #: _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A																						
B																						
C																						
D																						
E																						
F																						
G																						
H																						
I																						
J																						
K																						
L																						
M																						
N																						
O																						
P																						
Q																						
R																						
S																						
T																						
U																						
V																						
W																						
X																						

PIT DEPTH GRID 1 OF 2

Form H: Direct Examination Data Sheet - Page 5 of 10

EXTERNAL PIT DEPTH MEASUREMENT GRID SHEETS

DA/ILI

Route Number: _____
Examination Date: 11/13/2011
Mile Point: _____
By: d}
PG&E Project Manager: _____
Approved By: _____
Order Number: _____

DA

N-Segment: _____
IMA Number: _____
Region Number: _____
Subregion # (ICDA): _____
Stationing: _____

ILI

ILI Log Distance: _____
RMP-11 Ref. Section: Table 5.6.2
Reference Girth Weld: _____
Distance From Girth Weld: _____

Grid Size = _____Inch x _____Inch (specify grid size)
Clock Position (specify below)

Anomaly #: _____ Grid #: _____

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
A																						
B																						
C																						
D																						
E																						
F																						
G																						
H																						
I																						
J																						
K																						
L																						
M																						
N																						
O																						
P																						
Q																						
R																						
S																						
T																						
U																						
V																						
W																						
X																						

PIT DEPTH GRID 2 OF 2

INTERNAL CORROSION PIT DEPTH GRID

DA/ILI		DA		iLI	
Route Number:		N-Segment:		ILI Log Distance:	
Examination Date:	11/13/2011	IMA Number:		RMP-11 Ref. Section:	Table 5.6.2
Mile Point:				Reference Girth Weld:	
Examination Performed By:	d}	Region Number:		Distance From Girth Weld:	
PG&E Project Manager:		Subregion # (ICDA):			
Approved By:		Stationing:			
Order Number:					

Grid Size = 6.0 Inch x 6.0 Inch
Clock Position (specify below)

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.149	0.149	0.149	0.150	0.150	0.149						
B	0.149	0.149	0.149	0.151	0.149	0.150						
C	0.149	0.150	0.149	0.151	0.150	0.150						
D	0.150	0.150	0.150	0.149	0.151	0.150						
E	0.149	0.149	0.149	0.150	0.150	0.149						
F	0.150	0.149	0.149	0.150	0.151	0.149						
G												
H												
I												
J												
K												
L												

INTERNAL CORROSION GRID
1 of 1

COATING DAMAGE

DA/ILI

Route Number:
Examination Date: 11/13/2011
Mile Point:
Examination Performed By: dj
PG&E Project Manager:
Approved By:
Order Number:

DA

N-Segment:
IMA Number:
Region Number:
Subregion # (ICDA):
Stationing:

ILI

ILI Log Distance:
RMP-11 Ref. Section: Table 5.6.2
Reference Girth Weld:
Distance From Girth Weld:

NO.	FEET FROM REFERENCE	O'CLOCK	MAX LENGTH (IN.)	MAX CIRC EXTENT (IN.)
1	0	360 deg	12'	14.13

CORROSION LOG

DA/ILI

Route Number:
Examination Date: 11/13/2011
Mile Point:
Examination Performed By: d}
PG&E Project Manager:
Approved By:
Order Number:

DA

N-Segment:
IMA Number:
Region Number:
Subregion # (ICDA):
Stationing:

ILI

ILI Log Distance:
RMP-11 Ref. Section: Table 5.6.2
Reference Girth Weld:
Distance From Girth Weld:

IC or EC	FEET FROM REFERENCE	O'CLOCK	MAX PIT DEPTH (MILS)	MAX LENGTH (IN.)	MAX CIRC EXTENT (IN.)

PHOTO LOG

DA/ILI
Route Number:
Examination Date: 11/13/2011
Mile Point:
Examination Performed By: d}
PG&E Project Manager:
Approved By:
Order Number:

DA
N-Segment:
IMA Number:
Region Number:
Subregion # (ICDA):
Stationing:

ILI
ILI Log Distance:
RMP-11 Ref. Section: Table 5.6.2
Reference Girth Weld:
Distance From Girth Weld:

PHOTO NO.	LOCATION	DESCRIPTION	COMMENTS

DA/ILI		DA		ILI	
Route Number:		N-Segment:		ILI Log Distance:	
Examination Date:	11/13/2011	IMA Number:		RMP-11 Ref. Section:	Table 5.6.2
Mile Point:				Reference Girth Weld:	
Examination Performed By:	dj	Region Number:		Distance From Girth Weld:	
PG&E Project Manager:		Subregion # (ICDA):			
Approved By:		Stationing:			
Order Number:					

3.0 Recoat Data

3.1 Sandblast Media: _____ **Anchor Profile Measurement:** _____

3.2 Pipe Recoated With:

☐ Powercrete J ☐ Wax Tape ☐ Bar-Rust 235 ☐ Dev Grip 238 ☐ Dev Tar 247 ☐ Protal 7200 ☐ PE Tape

3.3 For Epoxy Coating Systems, Record Environmental Condition:

Air Temperature: _____ Dew Point: _____

Pipe Temperature: _____ Relative Humidity: _____

Time of Day: _____

3.4 Repair Coating Hardness (If ARC Coating:) _____

3.5 Measured Coating Thickness: 3:00 - _____ 6:00 - _____ 9:00 - _____ 12:00 - _____

Holiday Tested?: ☐ Yes ☐ No

Device Used: ☐ Coil ☐ Wet Sponge Voltage Used: _____ Repair All Holidays.

3.6 Coupon Test Station Installed?: ☐ Yes ☐ No **ETS Installed?:** ☐ Yes ☐ No

If Yes, Date Installed: _____

Surface Configuration:: ☐ Fink ☐ G-5 Box ☐ Carsonite ☐ Other: _____

3.7 Backfill Material: ☐ Native ☐ Imported Sand ☐ Other: _____

Coating Protections?: ☐ Yes ☐ No

If Yes, Check One: ☐ Rockguard ☐ Tuff-N-Nuff ☐ PipeSaver ☐ Other: _____

3.8 Pipe-to-Soil Readings Over Bell Hole After Backfill: _____

*If specified, a CIS should be done for approximately 100' on either side of the bell hole. Attach data.

Comments: _____

3.9 Attach site sketch of excavation site.

4.0 Repair Data

4.1 Repair Made: ☐ Yes ☐ No **4.1 Number of Repairs Made:** _____

4.3 Repair Type: ☐ Metallic Sleeve ☐ Non Metallic Sleeve ☐ Replace ☐ Can ☐ Filler Metal ☐ Other

4.4 Damage Repaired: ☐ Corrosion ☐ Mechanical ☐ Other

Misc. Comments/Information: _____

Form H: Direct Examination Data Sheet

DA/ILI

Route Number:
Examination Date: 11/13/2011
Mile Point:
Examination Performed By: dj
PG&E Project Manager:
Approved By:
Order Number:

DA

N-Segment:
IMA Number:
Region Number:
Subregion # (ICDA):
Stationing:

ILI

ILI Log Distance:
RMP-11 Ref. Section: Table 5.6.2
Reference Girth Weld:
Distance From Girth Weld:

Test Equipment	Serial No.	Technique	Test Medium	Quality Control	Surface Condition
■ Yoke	15386/B300	■ Continuous	■ Wet	Batch #	■ As Blasted NACE 2
☐ Permanent Magnet		☐ Residual	☐ Dry	Batch #	☐ Bare Metal
☐ Coil		☐ AC	■ Fluorescent	Batch # 09f001	☐ As Ground
☐ Other		☐ DC	☐ Black on White	Batch #	☐ Painted
					☐ Other (Walnut Blasted)

Reference GPS:

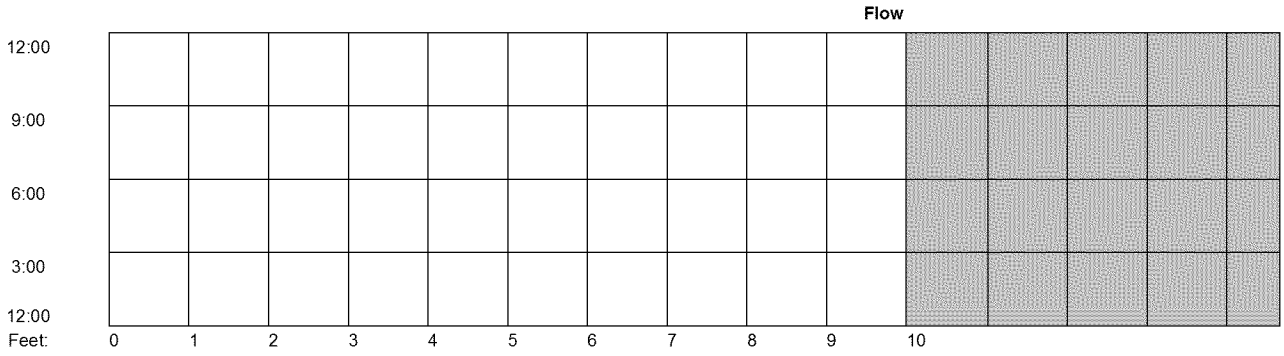
Northing:
Easting:

Acceptance Criteria: API 1160

Accepted? ☐ Yes ■ No, See Table below.

Map of Magnetic Particle Indications:

Zero Reference Point: edge of exposed pipe.



Table

Ind No.	Axial Position	Circumferential Position	Indication Length	Wall Thickness before Softpad	Wall Thickness after Final Softpad	Indication Removed (Yes, No)
1	4'	6:00	.75"	in weld		
2	7	12:00	1"	in weld		

Notes: Linear indication 1 is located in the reinforcment weld at 6:00. Linear indication 2 is located in the 90 deg tangent weld at 12:00.

The examination above was performed to the best of my professional ability in accordance with Mears MPE-01.

Technician's Signature: Mears Level: Date:

Assistant: Mears Level: Date:

Form H: Site Map

DA/ILI		DA		ILI	
Route Number:		N-Segment:		ILI Log Distance:	
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Mile Point:				Reference Girth Weld:	
Examination Performed By:	dj	Region Number:		Distance From Girth Weld:	
PG&E Project Manager:		Subregion # (ICDA):			
Approved By:		Stationing:			
Order Number:					

*Sketch Not Drawn to Scale

Misc. Comments/Information About Area Surrounding Ditch:

DA/ILI

Route Number:
Examination Date: 11/13/2011
Mile Point:
Examination Performed By: dj
PG&E Project Manager:
Approved By:
Order Number:

DA

N-Segment:
IMA Number:
Region Number:
Subregion # (ICDA):
Stationing:

ILI

ILI Log Distance:
RMP-11 Ref. Section: Table 5.6.2
Reference Girth Weld:
Distance From Girth Weld:

Section of pipe

Clock Position	1	2	3	4	5	6	7	8	9	10	11	12
1:00	0.149	0.149	0.149	0.151	0.152							
2:00	0.149	0.151	0.151	0.151	0.151							
3:00	0.149	0.151	0.150	0.149	0.152							
4:00	0.150	0.150	0.150	0.152	0.153							
5:00	0.149	0.151	0.151	0.153	0.152							
6:00	0.149	0.149	0.149	0.152	0.150							
7:00	0.149	0.151	0.149	0.152	0.152							
8:00	0.150	0.150	0.150	0.152	0.153							
9:00	0.150	0.149	0.149	0.152	0.152							
10:00	0.149	0.149	0.149	0.153	0.152							
11:00	0.149	0.151	0.150	0.151	0.152							
12:00	0.149	0.151	0.150	0.151	0.153							