



CPUO Meeting Materials

Weekly Non-Destructive Examination Program Updates

January 3, 2014

DRAFT For Discussion Purposes Only

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- PG&E/SE Alignment
 - L-114
 - Extent of Conditions for TCI Inspections
 - NDE Program Enhancements
 - NDE Program Validation Protocols/Extent of Conditions (LLNL)

- Completed Activities To Date

- Next Steps
 - Schedule
 - Immediate Needs



Completed Activities to Date

- See 11/22/13 presentation for items prior to 11/22/13
- Validation of 5 welds on L-132 (11/15/2013)
 - All 5 Welds passed radiographic inspection per API 1104
- Engaged Lawrence Livermore National Labs (LLNL)
 - Developed Scope of Work
 - Finalized contract/agreement; awaiting final signature
- Excavated/Tested/Passed 23 welds as of 12/20/13:
 - 5 welds on L-132
 - 12 welds at Vernalis Station
 - 2 welds at 8 Mile Rd Pressure Limiting Station (PLS)
 - 4 welds on L-108 (MLV38.1)
- Completed L-114 Final Report
- Created Maps of pipeline segments to be Leak Surveyed as a result of L-114 Findings
- Completed 1st monthly Leak Survey of 600 miles of pipeline



Follow-Up Questions from 12/20/13

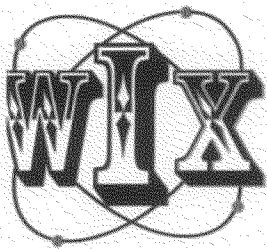
- SED: No “Reader Sheet” for welds associated with WV-5D/E.
 - PG&E has provided the “Reader Sheet” from WIX associated with WV-5D/E in the Appendix of this presentation.
- SED: SEDonce again requests the list of 3755 welds associated with TCI Weld Inspections.
 - PG&E requests that it provide a consolidated list of the welds by 1/17/2014. PG&E is working to consolidate the list of 3755 welds (2010-2011 and 2012-2013), as well as provide greater detail to each line item for the purpose of submitting to TCI as part of a reimbursement settlement. Allowing for the submittal to take place on 1/17/2014 would eliminate redundancy and provide greater data quality.
- SED: SEDonce again requests the list of 398 welds that were comprehensively reviewed by PG&E as part of the TCI Weld Inspection review.
 - PG&E requests that it provide a consolidated list of the welds by 1/17/2014. PG&E is working to consolidate the list of 398 welds (2010-2011 and 2012-2013), as well as provide greater detail to each line item for the purpose of submitting to TCI as part of a reimbursement settlement. Allowing for the submittal to take place on 1/17/2014 would eliminate redundancy and provide greater data quality.
- SED: SEDdoes not have a copy of the Welding Control Manual that PG&E submitted via FTP. Please provide a copy no later than 1/3/2014.
 - PG&E has a full electronic file (5M) and will provide SED during today's meeting.

- High Level activities within the next 6 Weeks
- See 11/22/13 presentation for prior items:
 - Issue L-114 Final Report [12/6/13] Submitted (12/6) ✓ 3)
 - Inspection of first 20 TCI Welds [12/31/13] (23 completed as of 3) ✓ '2013)
 - Finalize Keifner & Associates Contract (Under Master Service Agreement) ✓ it)
 - Finalize LLNL contract (1/10/2014)
 - Currently agreement is ready for signature through LLNL and PG&E
- Inspection of all 43 TCI Welds [3/31/14]
 - 23 welds verified to date; all have high weld quality
 - WV-2A/B scheduled for 1/20/2014
 - WV-4A/B/C scheduled for 1/20/2014
- LLNL to validate TCI Dig plan and issue recommendations if necessary (43 digs) (2/1/2014)
- LLNL to recommend validation protocol for remainder of pipe segments required to have been inspected by radiographic inspection methods. (4/1/2014)



Appendix I

WIX Reader Sheet for WV-5Welds:



Western Industrial X-Ray, Inc.

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Date 12.13.13 Page 1 Of 1
 Radiographic Report or Control # #1 RIG C
 Customer PG&E
 Address _____
 Customer's P.O. Number _____
 Job Location LODI, CA
 Job Number 30919862
 Item Description 12"/16" GIRTH WELDS
 100% Insp. Spot Insp. _____ Percent _____

Nondestructive Inspection Report

Piece or Joint #s	Weld Number	Film No.	A c c	R e j	Defect Code	Comments	Work Summary	
							Amount	Description
LOCATION E	W-64-RI	3	✓			12" .375	<u>2</u> Travel Hours	<u>2</u> # Persons
LOCATION E	W-65-RI	3	✓			12" .375	<u>0800</u> In Time	<u>1200</u> Out Time
							<u>4</u> Work Hours	
LOCATION D	W-72-RI	3	✓			12" .375	<u>0</u> Standby Hours	
LOCATION D	W-74-RI	3	✓			16" .375	<u>6</u> Total Hours	
							Per Diem _____	# Persons _____
							<u>90</u> Mileage One Way _____	Round Trip <input checked="" type="checkbox"/>
							<u>3</u> Weld <u>12"</u> in. dia.	Weld _____ in. dia.
							<u>1</u> Weld <u>16"</u> in. dia.	Weld _____ in. dia.
							Weld _____ in. dia.	Weld _____ in. dia.
							Film _____ x _____	Type _____
							Film _____ x _____	Type _____
							Technique Date/Procedure Qualification	
							Inspection Specification	<u>API 1104</u>
							Acceptance Standard	<u>20TH</u>
							RT Procedure No.	<u>RT-Z</u> Shooting Sketch (RSSS) <u>D</u>
							View: <u>DWE</u> <u>SWV</u> Source <u>Ir192</u> Curies <u>85</u>	
							Physical Source Size: <u>106 X 114</u> Effective Focal Spot: <u>156</u>	
							Pb Screens: Front <u>005</u> Center <u>0</u> Back <u>010</u>	
							Dia. <u>12"</u> Material Type: <u>CS</u> Thickness: <u>375</u> Reinf.: <u>125</u>	
							SFD: <u>12.75</u> Source To Obj.: <u>12.4"</u> IQI Essential Wire: <u>013</u>	
							Exp. Time: <u>0</u> min. <u>50</u> sec. Dev. Time: <u>5</u> @ <u>68</u> deg.	
							Film Manufacturer: <u>AGFA</u> Speed: <u>D5</u> No. of Exp. <u>3</u> Film <u>3</u>	
							Geometric Unsharpness (Ug): <u>005</u> Avg. Density: <u>2.7</u>	
							Dia. <u>16"</u> Material Type: <u>CS</u> Thickness: <u>375</u> Reinf.: <u>125</u>	
							SFD: <u>16"</u> Source To Obj.: <u>15.625</u> IQI Essential Wire: <u>013</u>	
							Exp. Time: <u>1</u> min. <u>25</u> sec. Dev. Time: <u>5</u> @ <u>68</u> deg.	
							Film Manufacturer: <u>AGFA</u> Speed: <u>D5</u> No. of Exp. <u>3</u> Film <u>3</u>	
							Geometric Unsharpness (Ug): <u>004</u> Avg. Density: <u>2.7</u>	
							Dia. _____ Material Type: _____ Thickness: _____ Reinf.: _____	
							SFD: _____ Source To Obj.: _____ IQI Essential Wire: _____	
							Exp. Time: _____ min. _____ sec. Dev. Time: _____ @ _____ deg.	
							Film Manufacturer: _____ Speed: _____ No. of Exp. _____ Film _____	
							Geometric Unsharpness (Ug): _____ Avg. Density: _____	

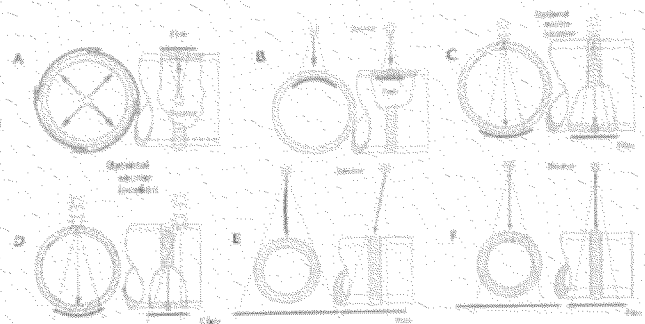
Defect Code

- BT - Burn Through
- C - Crack
- CV - Root Concavity
- CX - Root Convexity
- DT - Drop Through
- ICP - Inadequate Cross Penetration
- IF - Incomplete Fusion
- IP - Incomplete Penetration
- PD - Inadequate Penetration Due to High-Low
- Ox - Oxidation
- P - Porosity
- SL - Slag Lines
- SI - Slag Inclusions
- UC - Undercut
- TI - Tungsten Inclusion

Redacted

Level II

Level I



The person signing this document represents that they have the authority to sign on the behalf of the customer. This report does not guaranty or warranty the condition of the material tested. Western Industrial X-Ray, Inc. is not liable for any interpretation of results or losses attributable to any testing performed. There is no warranty for these services. Any liability is limited to the amount paid for the services in question. Final film interpretation is the responsibility of the customer.

Date 12.13.13

Customer's Signature _____