



CPUC Meeting Materials

Weekly Non-Destructive Examination Program Updates

November 22, 2013

DRAFT – For Discussion Purposes Only

1

- PG&E/SED 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



PG&E/SED Alignment on four critical workstreams

- PG&E would like to update SED each week with the intent on covering (4) components to the overall NDE Program:
 - L-114 – This will be an update to the progress of PG&E’s final report detailing the findings and remediation of any and all concerns with L-114 in Brentwood.
 - Extent of Conditions for TCI Inspections – This update will consist of all activities related to the validation of TCI welds as defined in the Testing Plan submitted to SED
 - NDE Program Enhancements – This will be an update to our progress of NDE enhancements spanning from Q3 2012 through present day.
 - NDE Program Validation Protocols/Extent of Conditions (LLNL) – This will be an update to progress associated with the Validation of all vendors in the Pipeline Safety Enhancement Program. This program will identify the necessary actions required by PG&E to ensure no weld integrity issues exist.

- PG&E activities to validate welds inspected by TCI (Listed by Weld Validation number, e.g. WV-XXX, per PG&E Dig Management PMO Tracking Sheet):
 - WV-132-13 (completed 11/15/2013)
 - 5 welds located Redacted of Milpitas Terminal on L-132 cross-tie
 - All 5 welds “finger-printed”
 - All 5 welds passed inspection per API 1104
 - WV-06A (L-108/L-401) (12/10/2013)²
 - 14 welds to be evaluated at dig site
 - WV-05D (L-108) (12/18/2013)²
 - 2 Welds to be removed as part of pipe replacement project
 - Weld will be sent to ATS for radiographic testing
 - WV-05E (L-108) (12/18/2013)²
 - 2 Welds will be removed as part of pipe replacement project
 - Welds will be sent to ATS for radiographic testing

¹Activity progress/completion is discussed in the Completed Activities To Date section

²Dates are contingent on weather, permit, and/or construction schedules



NDE Program Enhancements

- Increased job observation frequency from quarterly to weekly (Q1 2013)
- Expanded job observations outside of new construction (Q1 2013)
 - Station Projects
 - Integrity Management Inspection Projects
- Issuance of Gas Welding Control Manual (TD-4160M) (Q2 2013)
 - Sets minimum Requirements for qualifications, procedures, and materials for NDE
- Development of Gas NDE Control Manual (TD-4190M) (Started Q2 2013)
 - Establishes procedures for all NDE inspections
- Comprehensive review of all NDE Contractor procedures and qualifications (Q2 2013)
- Engagement of 3rd Party experts for the review and execution of new contracts with NDE service providers (Q2 2013)
- Integrity Management NDE vendor's procedures were reviewed and personnel proficiency tested for the performance of inspections (Q3 2013)
- Facility and NDE program audits were conducted for existing and prospective NDE service providers (Q3 2013)
- Online OQ Training modules (Veriforce) developed for contractor NDE

DRAFT - For Discussion Purposes Only

5



NDE Program Validation Protocols

- Engaged 3rd Party experts (LLNL) to develop scope and provide historical understanding (11/21/2013)
- Working to establish contracts with Lawrence Livermore National Labs
 - Working to meet contract requirements, and fee structure requirements
- LLNL will work to provide the following:
 - Validation of statistical approach to TCI Extent of Conditions/Remediation
 - PG&E will work to incorporate LLNL improvements if any
 - Development of Extent of Condition for Post-'61 Transmission Pipe
 - Development of Validation Protocol for Post-'61 Transmission Pipe
 - Inspection methods
 - Girth weld integrity



Completed Activities to Date

- PG&E terminated TCI as a PG&E-approved vendor (4/1/13)
- Review of 3,755 inspections dating from 2012-2013¹
- Submittal of “Quality Assurance Program for Radiographic Inspections” presented to CPUC (10/31/13)
- Increased frequency and quantity of job site observations of NDE contractors
- Completed a detailed, independent third-party review of all contractors certification programs and NDE Procedures
- Retained qualified independent third-party to review all TCI Validation radiographs
- Completed notification to local agency authorities in the cities and counties affected by the citation in accordance with Resolution ALJ-274 (11/6/13)
- “With input from SED, retain a technically qualified third party to develop a comprehensive Extent of Condition Analysis and Re-Inspection & Remediation”
 - Engagement with Lawrence Livermore National Labs has commenced
 - Currently working to finalize LLNL/PG&E contract
- Validation of 5 welds on L-132 (11/15/2013)
 - All 5 Welds passed radiographic inspection per API 1104

¹This population contained some 2010 and 2011 welds

DRAFT – For Discussion Purposes Only

- High Level activities within the next 6 Weeks
 - Expand the transmission leak survey program and perform additional surveying of affected transmission lines
 - Integrated Leak Survey plan for additional 640 miles to commence in December 2013
 - Development of flight maps to facilitate aerial leak survey is currently underway
 - Comprehensive Map and corresponding data will be available for 12/6/2013 meeting
 - Leak analysis associated with prior girth welds (Transmission Pipe, post-1961 construction, requiring radiographic inspection)
 - Leak data has been collected and is currently being correlated with pipe segments
 - Analysis scheduled for completion on 12/2/2013
 - Finalize Contract with LLNL [11/27/13]
 - Issue L-114 Final Report [12/6/13]
 - Inspection of first 20 TCI Welds [12/31/13] (5 completed as of 11/15/2013)
 - Inspection of all 43 TCI Welds [3/31/14]
 - Provide summary of NDE Program Enhancements
- Detailed TCI Weld Validation Schedule

Appendix I

Inspection Summary for L-132 Welds:
W-31, W-32, W-33, TI-9, TI-10

DRAFT – For Discussion Purposes Only

9