



CPUO Meeting Materials

Weekly Non-Destructive Examination Program Updates

August 8, 2014

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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



- See presentation dated 7/11/2014 for past items
 - LLNL has completed “Technical Report”
 - Mathematical model that provides numerical results to their findings
 - LLNL/PG&E concerned that it does not provide direction to SED/PG&E
 - LLNL to work with industry experts apply the results to utility operations
 - PG&E currently working on recommended steps shown in “Technical Report”
 - PG&E to geographically locate each weld
 - PG&E to categorize each weld
 - In areas susceptible to ground movement/Tie-In welds
 - NOT in areas susceptible to ground movement
 - LLNL to work with Materials Experts to determine Critical Flaw Size for each weld
 - LLNL will utilize Materials/Fracture Mechanics Study to determine probability of defect occurring in each weld based upon critical flaw size.

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

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



NDE Program Validation Protocols

- See presentation from 7/11/2014 for previous notes
 - CPUC SED provided approval to IM approach on 6/6/14
 - Integrity Management Factors for Inclusions for Girth Welds still in DRAFT Form
 - PG&E has contracted DNV for 3rd Party Review of all updated IM procedures/standards
 - PG&E continuing to develop “Risk Factors for inclusion” into IM program
 - PG&E has secured Industry Expert as Consultant to update/create Standards and procedures for modified IM Program
 - PG&E has secured 3rd Party Industry Expert (Bill Amend-DNV) as Review Consultant to all updated/created Standards and procedures to ensure a quality program
 - PG&E targeting system-wide implementation Q1 2015



Follow-up to SED's 7/22 Request

Can we confirm that each of the 488 welds met the test requirements of 49 CFR §192.503, §192.505, and/or §192.507?

A total of 488 non-compliant TCI welds were reviewed

- 418 welds were confirmed to have compliant HydroTest
- 57 welds were Tie-In welds and therefore did not have a HydroTest
- 13 welds need further investigation as noted in the detail sheet (Appendix I)
 - 11 welds are in job package not yet scanned to ECTS
 - 2 welds have no weld number on spreadsheet and need further investigation



Completed Activities to Date

- See 7/11/14 presentation for items prior to 7/11/14
- LLNL has completed review of 488 Non-Compliant welds from TCI
- Framework for long term IM approach completed
 - Continual revisions occur to overall program until “best approach” is developed
- Initiated agreement with Party Reviewer (DNV– Bill Amend) to provide review/endorsement of PG&EM Plan



- High Level activities within the next 6 Weeks
 - See 2/7/14 presentation for prior items:
 - PG&E to locate all welds and determine those coincident with areas of ground movement (currently working on)
 - LLNL to provide structural analysis (Critical Flaw Size analysis) on all welds coincident with ground movement
 - Establish Dig Plan/Inspection Criteria for 12 Welds found through ILI
 - Update Integrity Action Plan (IAP) (currently working on)
 - Revised IM procedures to incorporate “non-compliant weld inspections” into PG&E Integrity Management Risk Model (currently working on)



Appendix I

Confirmation of HydroTest for 488 Non-Compliant TCI Welds

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