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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms	R.11-02-019 (Filed February 24, 2011)

REPORT OF PACIFIC GAS AND ELECTRIC COMPANY ON STATUS OF MAXIMUM ALLOWABLE OPERATING PRESSURE VALIDATION PROJECT AS OF JULY 31, 2011

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Pacific Gas and Electric Company ("PG&E") hereby provides a status update as of July 31, 2011, on PG&E's records collection, Pipeline Features List ("PFL") build, Maximum Allowable Operating Pressure ("MAOP") validation efforts, and ongoing efforts to locate records of pressure tests. PG&E completed the MAOP validation for all Priority 2 miles by the July 31, 2011 completion date and is working diligently to meet the August 31, 2011 completion date for the Priority 3 and 4 miles within the stringent quality guidelines set by the California Public Utilities Commission ("Commission") in the interest of public safety.[1/]

The fundamental goal of this unprecedented effort is to "ensure safe operations and to restore public trust," pulling together complete and detailed records with which to validate the MAOP of PG&E's gas transmission system. D.11-06-017, at p. 17 and Ordering Paragraph 1, at

1/ This is PG&E's next to last monthly status report on our MAOP validation effort. PG&E has been submitting monthly status reports consistent with "PG&E's Compliance Plan for NTSB Safety Recommendations" ("Compliance Plan"), submitted to the Commission as part of the March 24, 2011 stipulation between PG&E and the Commission's Consumer Protection and Safety Division ("CPSD"). See PG&E's Compliance Plan for NTSB Safety Recommendations, at pp. 2-3. As explained in prior monthly reports, the CPUC has not directly ruled on the Compliance Plan, although Decision No. 11-06-017 directs PG&E to complete its MAOP validation effort. D.11-06-017, Ordering Paragraph 1. The final monthly report will be submitted on Monday, September 12, 2011. In addition, because the detailed MAOP validation information being provided includes sensitive infrastructure information, such as the precise location of valves, taps and regulators, PG&E is providing the DVDs to CPSD under Public Utilities Code section 583. PG&E will make DVDs with more high level, summary information available to any interested party.

p. 30. PG&E appreciates and supports the Commission's extraordinary focus on both enhancing safety and restoring the public's trust reflected in the Commission's various directives on this project.

I. BACKGROUND

To provide context, PG&E repeats below the Background section used in prior reports.

On January 3, 2011, the National Transportation Safety Board ("NTSB") issued three urgent safety recommendations to PG&E with respect to searching for records and validating the MAOP of PG&E's transmission lines in Class 3 and Class 4 locations and Class 1 and 2 high consequence areas ("HCAs").[2/] That same day, Commission Executive Director Clanon sent PG&E a letter directing the company to comply with the first two NTSB recommendations. With respect to the NTSB's third recommendation, Mr. Clanon said PG&E "will receive further directives from the Commission." The Commission ratified the Executive Director's directive in Resolution L-410 (January 13, 2011).

PG&E's Compliance Plan was submitted to the Commission as Attachment 1 to the March 24, 2011 stipulation between PG&E and CPSD. The Compliance Plan identifies the priorities and the schedule for completing PG&E's MAOP validation efforts. PG&E and CPSD identified the following four priorities for validating the MAOP for pipeline segments in HCAs for which PG&E has not yet located pressure test records:

- **Priority 1:** 152 miles for segments for which the records indicate the segments have common characteristics with the records for the ruptured segment of Line 132, specifically pre-1962 24- to 36-inch double submerged arc welded (DSAW) pipe or pre-1974 seamless pipe greater than or equal to 24 inches in diameter.
- **Priority 2:** 295 miles for segments for which the records indicate the pipe contains low frequency electric resistance welds (ERW), single-submerged arc welds (SSAW), or flash and lap welded pipe installed prior to 1970.

2/ As PG&E has previously noted, this is not the definition of HCAs that PG&E uses for its integrity management program. For the sake of simplicity, this Status Report uses "HCAs" to refer to all the pipe segments in Class 3 and Class 4 locations and Class 1 and 2 HCAs, and phrases such as "HCA pipelines" and "HCA miles" to refer to the pipelines covered by the records validation, not PG&E's integrity management program.

- **Priority 3:** 206 miles of all remaining segments installed prior to July 1, 1970 for which records are still under review.
- **Priority 4:** 52 miles of all remaining segments installed after July 1, 1970 for which records are still under review.

On June 30, 2011, PG&E submitted a report on PG&E's system-wide class location verification effort to the CPUC. That report explained that a number of miles of pipeline had changed in class location. As a result of the class location verification review, 94 miles of pipelines that were not HCA pipelines have now been identified as Class 3 and Class 4. PG&E has prioritized gathering the necessary records for these segments to perform the records-based MAOP validation.

II. UPDATE ON PRESSURE TEST RECORDS

The additional pressure test records identified after PG&E's March 15, 2011 Report have reduced the miles to be pressure tested, and changed the MAOP Priority category miles.[3/] As discussed in the Background section above, the MAOP Priority mileages were based on validating MAOP for pipeline segments in HCAs for which PG&E had not yet located pressure test records. The segments for which PG&E has located pressure test records after March 15 are by definition now a lower priority.

Since the July 11, 2011 Report, PG&E has been able to tie an additional 8 miles of Priority 1 pressure tests previously considered "partial mileage" records (i.e., which had not been linked to specific segments) to the proper segments, so these 8 miles are now complete. Table 1 below shows the old and new completed mileage, grouped by completion date:

3/ Despite having confirmed additional miles of complete pressure test records PG&E completed all 152 Priority 1 miles.

Table 1
UPDATED PRIORITY MILEAGE IN LIGHT OF RECENTLY LOCATED OR CONFIRMED PRESSURE TEST RECORDS

Priority	Completion Date	Compliance Plan Miles	Complete Pressure Test Miles Confirmed Between March 15 and July 31	Revised Mileage
1	June 30, 2011	152	20	132
2	July 31, 2011	295	32	263
3 & 4	August 31, 2011	258	24	234
Total		705	76	629

III. RESULTS OF MAOP VALIDATION FOR PRIORITY 2 MILES

PG&E has completed the MAOP validation for the 295 Priority 2 miles. Combined with the Priority 1 miles, the MAOP validation has now been completed for approximately 450 miles.

As a result of the MAOP validation for the Priority 2 miles, PG&E lowered the pressure or is in the process of lowering the pressure on sections of the four pipelines identified below. For some of these pipelines the reductions are on an interim basis pending a validation dig. The four pipelines are:

- Line 301A: A section of Line 301A near Hollister by 2 psig from 396 psig to 394 psig. This reduction is required as a result of field verification and non destructive examination performed for specifications associated with four manufactured bends, which can only support an MAOP of 394 psig. The bends will be replaced prior to pressure restoration.

- Line 57A: A section of Line 57A near Discovery Bay by 2 psig from 722 psig to 720 psig. This is based upon conservative assumptions regarding flange fittings. A validation dig is currently underway to verify flange fitting specifications.

- Line 108: A section of Line 108 near Thornton by 40 psig from 490 psig to 450 psig. This is based upon conservative assumptions regarding specifications associated with 1940's vintage pipe. A validation dig will be performed to verify pipe specifications at a later date.

- Line 123: A section of Line 123 near Rocklin by 22 psig from 500 psig to 478 psig. This is based upon conservative assumptions regarding specifications associated with 1943 vintage pipe. A validation dig will be performed to verify pipe specifications at a later date.

IV. THE OUTLOOK FOR COMPLETING ALL PRIORITY 3 & 4 MILES BY AUGUST 31

PG&E is continuing our aggressive effort on this important work. Although we face numerous challenges described below, we are hopeful that we will complete the Priority 3 & 4 MAOP validation work by the August 31st deadline.

Approximately 13 miles of the 234 miles of Priority 3 & 4 segments[4/] are associated with 620 unique segments, consisting of limited features that include appurtenances such as blow-downs, drips, customer service lines, etc. identified as "shorts." Many of the "shorts" are of much smaller diameter and operate at lower percentages of specified minimum yield strength (SMYS) than the mainline pipeline that supply natural gas to these appurtenances. Similar to the process followed for Priority 2, to focus resources on the highest priority segments and proceed in the most prudent manner, PG&E recommends that the PFLs and the MAOP validation of "shorts" be completed with the respective priority of mainline pipeline except those "shorts" that are of similar diameter as the mainline pipeline. This would result in approximately 6 miles associated with approximately 140 "shorts" being completed with segments of lower priority than Priorities 3 & 4, resulting in an overall reduction of Priority 3 & 4 mileage to 228 miles.

Even without considering the "shorts" discussed above, the Priority 3 and 4 MAOP validation miles are less than twice the mileage of Priority 1, but involve nearly three times as many PFLs – approximately 390 PFLs by August 31st versus 130 completed for June.

PG&E has over 300 full time personnel (consultants, employees and support staff) working on this project. Approximately 120 people are identifying, collecting, and scanning the relevant documents necessary to compile PFLs and build folder packages. Another approximately 150 people are building the PFLs, performing quality control, resolving issues that arise and validating the MAOP. These personnel are supplemented by a team of program management, information technology and quality assurance personnel.

4/ The 234 miles are the miles to be reviewed net of the completed pressure test records confirmed between March 15, 2011 and July 31, 2011.

Although we have significant challenges in completing all the work required by August 31st, including rigorous process requirements combined with the steep increase in work volume, we remain optimistic that we will meet the deadline.

V. STATUS REPORT

A. Status of "traceable, verifiable and complete" documentation of "all as-built drawings, alignment sheets, and specifications, and all design, construction, inspection, testing, maintenance and other related records."

The purpose of this effort is to prepare the PFL folder, which contains the records documentation that will support the eventual PFL for each pipeline segment and respective components (e.g., valves, sleeves, bends, fittings, etc.), including as-built construction drawings, pipeline plan and profile drawings, bills of materials, material requisitions and specifications, A-forms, and pressure test records. As of July 31, PG&E has completed this phase for all Priority 3 and 4 segments.[5/]

B. Status of compilation of PFLs, including identification of all assumptions made and of all field work to complete the PFLs, and the results of all field work.

PG&E has completed the initial pass, prior to quality control, of a little less than half of Priority 3 and 4 miles at month's end. PG&E is continuing to develop the remaining PFLs, which undergo a rigorous, multi-level quality control check, including physical field verification of some pipeline characteristics where necessary.

PG&E performed five field excavations in July for MAOP Validation related to Priority 2 pipe.[6/] CPSD Staff was notified of each excavation. The first excavation was on July 20 on Line 124A in the Yuba City area to obtain wall thickness, validate yield strength measurements and

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5/ PG&E has increased the miles of pipe being validated in each phase for efficiency purposes and to be able to tie starting and ending points to physical appurtenances above ground. In other words, some segments may be listed as beginning or ending at a particular mile point, but when building a PFL, it is necessary to tie starting and ending points to appurtenances, and not just a mile point on a drawing.

6/ PG&E is scheduling additional excavations for Priority 2 segments in August, and will report on the results of those excavations in our September 12 Report. PG&E could not locate complete records associated with 23 "shorts" included in the Priority 2 work. These will require additional research including retracing the source of the "shorts" within GIS and potentially performing field validation digs.

characterize seam type of 16" pipe and 16" elbow. The second excavation was on July 26 on Line 304 in Tracy to obtain wall thickness, validate yield strength measurements and characterize seam type of 12" pipe and 12" elbow. The third excavation began on July 28 on Line 111A in Fresno, to obtain wall thickness, validate yield strength measurements and characterize seam type of 12" pipe and 12" elbow. The fourth excavation was on July 29 on Line 57A in the Brentwood area to characterize seam type of 18" pipe. The fifth excavation took place on July 29 on Line 186 in Merced to validate yield strength and characterize seam type of 4" diameter pipe. In each instance, the excavations confirmed that the assumptions used by PG&E for the unknown component specifications were more conservative than actual values obtained through field tests.

Additionally, PG&E performed two field excavations in July related to Priority 1 pipe.[7/] CPSD staff was notified of each excavation. The first excavation was on July 1 on Line 114 in the Brentwood area to obtain outer diameter and wall thickness measurements for a 22" bell-bell-chill ring bend and validate yield strength measurement of 22" pipe. The excavation confirmed that the assumptions used by PG&E were more conservative than actual values obtained through field tests. The second excavation was on July 18 on Line 107 in the Sunol area to obtain wall thickness, validate yield strength measurements and characterize seam type of 22" pipe and 22" elbow. As identified in the July 11 report, PG&E lowered the pressure on this section of the pipeline from 398 psig to 375 psig based on conservative assumptions about a 22" elbow for which PG&E could not locate complete records. The field inspection included radiographic, ABI and ultrasonic inspections that did not indicate any problems and as a result of this successful field inspection, the MAOP has been restored to 477 psig (although the pressure itself has not yet been increased).

7/ PG&E is scheduling additional excavations for Priority 1 segments in August, and will report on the results of those excavations in our September 12 Report.

C. Status of PG&E's progress in using "the traceable, verifiable, and complete records … to determine the valid maximum allowable operating pressure, based on the weakest section of the pipeline or component."

As of July 31, 2011, PG&E has validated the MAOP for all 152 miles of Priority 1 segments and all 295 miles of Priority 2 segments.

D. Summary of Quality Assurance/Quality Control recommendations and resulting process changes.

PG&E continues to have a team dedicated to perform Quality Control (QC) of all PFLs and has identified a separate team of contractors to perform independent Quality Assurance (QA) work for all steps in the process of the MAOP Validation Project. PG&E continues to refine the MAOP validation process, as appropriate, and over the course of the last month has made the following additional process changes:

- Created and implemented PFL vendor QC Issues report to provide weekly feedback to vendors on PFL build quality performance.
- Continued to refine and streamlined work flow, manual steps and document versions as appropriate. Also, introduced standard resolution documentation for "short" pipeline segments.
- Continued to refine process maps, tools and other relevant documents in an operating manual to ensure consistent application of standards and methodologies.

E. Discussion of any change PG&E makes to the transmission pipeline system as a result of any of the MAOP validation efforts.

See Section III above.

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CONCLUSION

PG&E remains committed to operating and maintaining its gas transmission pipeline system safely and reliably. The information PG&E is gathering, including the Pipeline Features Lists, are important components of our goal of improving our overall system performance and safety. We will continue to adopt a conservative approach to the MAOP validation effort, and we will strive to complete Priorities 3 and 4 by August 31 and complete the MAOP validation for the rest of the transmission system as soon as possible.

Respectfully Submitted,

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