

**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 AUGUST 31, 2011**

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Pacific Gas and Electric Company (“PG&E”) hereby provides a status update as of August 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 3 and Priority 4 miles by the August 31, 2011 completion date within the stringent quality guidelines set by the California Public Utilities Commission (“Commission”) in the interest of public safety.<sup>1/</sup> The MAOP validation has now been completed for more than 750 miles of pipeline, including all of Priorities 1 through 4.

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

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<sup>1/</sup> This is PG&E’s 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. In addition to this report, PG&E will provide CPSD with detailed MAOP validation information, which includes sensitive infrastructure information, such as the precise location of valves, taps and regulators. PG&E will submit this information on DVDs to CPSD under Public Utilities Code section 583 by Monday, September 12. PG&E will make DVDs with more high level, summary information available to any interested party.

MAOP of PG&E's gas transmission system. D.11-06-017, at p.17 and Ordering Paragraph 1, at p.30. PG&E appreciates and supports the Commission's focus on both enhancing safety and restoring the public's trust reflected in the Commission's various directives on this project.

## **I. BACKGROUND**

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<sup>2/</sup> for which PG&E had 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.
- 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.

## **II. UPDATE ON PRESSURE TEST RECORDS**

Since July 31, PG&E has been able to tie an additional 20 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 20 miles are now complete<sup>3/</sup>.

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<sup>2/</sup> 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.

<sup>3/</sup> PG&E will provide CPSD with a DVD containing the additional pressure test records that were located since the last report. As before, PG&E will be submitting the pressure test records under Section 583 due to employee names, but will make a redacted version available to interested parties.

Table 1 below shows the old and new completed mileage, grouped by completion date:

**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	Revised Mileage
			Between March 15 and August 31	
1	June 30, 2011	152	40	112
2	July 31, 2011	295	32	262
3 & 4	August 31, 2011	258	25	233
Total		705	97	607

Figures may not sum due to rounding.

Table 2 below shows complete, partial and pressure test records that are still under review.

**Table 2**  
**UPDATED MILES OF PRESSURE TEST RECORDS FOR 1805 MILES**

Records	Installed Before 7/1/1961	Installed 7/1/1961 to 6/30/1970	Installed 7/1/1970 and after	Total
Pressure Test (Complete Record)	216	280	679	1175
Pressure Test (Partial Record)	74	33	12	120
Pressure Test (1968 CPUC Filing)	18	4	N/A	23
Still Reviewing Records	414	36	37	487
<b>Total Miles</b>	<b>722</b>	<b>354</b>	<b>729</b>	<b>1805</b>
% with Pressure Test Records	43%	90%	95%	73%

For approximately 318 miles of the lines PG&E has verified pressure test documentation, the STPR footage tested does not equal the pipeline HCA footage. PG&E will continue to analyze all job-related documents such as construction field drawings, sketches, letters, and job notes to confirm that all relevant portions of the line have been pressure tested. Figures may not sum due to rounding.

### III. RESULTS OF MAOP VALIDATION FOR PRIORITY 3 AND PRIORITY 4 MILES

PG&E has completed the MAOP validation for the 258 Priority 3 and 4 miles. Combined with the Priority 1 and Priority 2 miles, the MAOP validation has now been completed for more than 750 miles.

As a result of the MAOP validation for the Priority 3 and 4 miles, PG&E has lowered the pressure on sections of two pipelines identified below:

- Line 177A: A section of Line 177A near Los Molinos by 201 psig from 819 psig to 618 psig. This reduction is to reduce pressure to 30% Specified Minimum Yield Strength, since PG&E only has a 6.33 hour pressure test conducted for two 12” elbows installed in 1971 that had been operating above that level. The identified pressure reduction for this section of the pipeline has been completed. The elbows will be replaced prior to pressure restoration.
- DFM 0126-01: A section of DFM 0126-01 near Richmond by 3 psig from 400 psig to 397 psig. This reduction is based upon conservative yield strength assumptions regarding 1960s vintage 22” reconditioned pipe. Additional field work including replacement will be performed or the MAOP will be lowered permanently based on the results of a system analysis.

A validation dig is under way to verify the specifications of an elbow on the following section of Line 191, and pressure may be reduced depending upon the results:

- A section of Line 191 near Antioch by 26 psig from 600 psig to 574 psig. This reduction is based upon the specifications included on the records for 1970s vintage 34” elbows. A validation dig is underway to verify elbow specifications included on the records and the elbows will be replaced based on the results of the field excavation.

Additionally, as a result of the MAOP validation for the Priority 3 and 4 miles, PG&E identified four pipelines where the current MAOP level could not be validated; however, a pressure reduction was not required for these pipelines as the current maximum operating pressure (MOP) is lower than the validated MAOP.

- Line 1209-01: A section of Line 1209-01 near Fresno by 70 psig from 720 psig to 650 psig. The current MOP of this section of the pipeline is 650 psig.
- Line 220: A section of Line 220 near Davis by 138 psig from 796 psig to 658 psig. This reduction is due to conservative assumptions regarding pipe installed in 1938. No additional pressure reductions were required for this section of the pipeline as the current MOP is 541 psig due to a new class location designation for a portion of Line 196 which ties into Line 220.
- Line X6535 (Cross-tie for L300A and L300B): A section of Line X6535 near Morgan Hill by 106 psig from 631 psig to 525 psig. This reduction is based upon specifications included on the records for 1950s vintage 30” pipe. It was validated that tap valves off L300A and L300B are in the closed position.

- STUB10412: A section of STUB10412 tapped off Line 200A-1 near Rio Vista by 114 psig from 800 psig to 686 psig. This reduction is based upon the specifications included on the records for 1990s vintage 12” pipe. No pressure reduction was required as the current MOP of this section of the pipeline is 541 psig.

PG&E could not locate complete records associated with 16 “short” appurtenances such as blow-downs, drips, customer service lines, etc. included in the Priority 3 and 4 work. These will require additional research including retracing the source of the “shorts” within GIS and potentially performing field validation digs. PG&E also ruled out pressure reductions on two pipeline segments due to additional information after August 31.<sup>4/</sup>

PG&E performed three field excavations in August for MAOP Validation related to Priority 3 and 4 pipe. CPSD Staff was notified of each excavation. The first excavation was on August 24 on Line 119B in the Sacramento area to obtain wall thickness, validate yield strength and characterize seam type of 12” pipe. The second excavation was on August 26 on Line 210A in the Fairfield area to obtain wall thickness, validate yield strength and characterize seam type of 10” pipe and 10” elbow. The third excavation was on August 26 on Line 142N in the Bakersfield area to obtain wall thickness, validate yield strength and characterize seam type of 16” 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 eight field excavations in August related to Priority 2 pipe. CPSD staff was notified of each excavation. The first excavation was on August 1 on Line 138 in the Selma area to validate wall thickness, yield strength and seam type of 16” pipe and 16” elbow. The second excavation was on August 10 on Line 50A in the Yuba City area to validate wall thickness, yield strength and seam type of 8” pipe and 8” elbow. The third excavation was on August 10 on Line 57A in the Brentwood area to validate wall thickness,

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<sup>4/</sup> After August 31 PG&E resolved a potential pressure reduction on Line 2 and resolved a potential pressure reduction on Line 1202-16. The DVD’s being provided to CPSD do not reflect this post-August 31 information.

yield strength and seam type of 14" pipe and 14" x 18" reducer as well as pressure rating of 18" insulating flange. The fourth excavation was on August 12 on Line 210B in the Cordelia area to validate wall thickness, yield strength and seam type of 16" pipe. The fifth excavation was on August 15 on Line 111A in the Yuba City area to validate wall thickness, yield strength and seam type of 8" pipe and 8" elbow. The sixth excavation was on August 22 on Line 118A in the Madera area to validate wall thickness, yield strength and seam type of 8" pipe and 8" elbow. The seventh excavation was on a different section of Line 118A, also in the Madera area, to validate wall thickness, yield strength and seam type of 12" pipe and 12" elbow. The eighth excavation was on August 24 on Line 118B in the Madera area to validate wall thickness, yield strength and seam type of 12" pipe as well as validate wall thickness measurements of 12" sleeve. The results of the excavations validated the information on the records as well as PG&E's use of assumptions, where applicable.

#### **IV. CONCLUSION**

PG&E remains committed to operating and maintaining its gas transmission pipeline system safely and reliably. Even though PG&E has completed the Priority 1 through Priority 4 work contemplated by the Compliance Plan, PG&E is continuing its aggressive effort on this important work as directed by D.11-06-017 and outlined in PG&E's August 26, 2011 Pipeline Safety Enhancement Plan. PG&E's focus will be completing HCA MAOP validation work for the remainder of the year and followed by MAOP validation work for non-HCA transmission pipelines in 2012. 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 the MAOP validation for the remainder of the gas transmission system as soon as feasible.

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Respectfully Submitted,

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