

**ATTACHMENT 1**

**PG&E'S SEPTEMBER 27, 2012  
MAOP REDUCTION LETTER ON LINE 111A**



Frances Yee  
Acting Director  
Regulatory Compliance & Support  
Gas Operations

375 N. Wiget Lane, Suite 200  
Walnut Creek, CA 94598

925-974-4316  
Fax: 925-974-4232  
Internet: FSC2@pge.com

November 8, 2012

General Jack Hagan, Director  
Consumer Protection and Safety Division  
California Public Utilities Commission  
505 Van Ness Avenue, Room 2205  
San Francisco, CA 94102-3298

Reference: 2012 Class Location Annual Study

Dear General Hagan:

In accordance with Pacific Gas and Electric Company's response to the CPUC Class Location Order Instituting Investigation (I.11-11-009), dated January 17, 2012, PG&E is providing a copy of the 2012 Class Location Annual Study.

If there are any questions regarding this report, please contact William Raymundo, Transmission Engineering Director, at (925) 974-4144.

Sincerely,

A handwritten signature in black ink, appearing to read 'Frances Yee', is written over a horizontal line. The signature is fluid and cursive.

Frances Yee  
Acting Director, Regulatory Compliance and Support

Attachment

cc: Patrick Berdge, Legal Division  
Kevin Boles, Consumer Protection Safety Division  
Kenneth Bruno, Consumer Protection Safety Division  
Julie Halligan, Consumer Protection Safety Division  
Willard Lam, Consumer Protection Safety Division  
Michael Robertson, Consumer Protection Safety Division  
Sunil Shori, Consumer Protection Safety Division

## 2012 CLASS LOCATION STUDY RESULTS

October 31, 2012

To: **Bill Raymundo**  
**Director, Gas Transmission Engineering and Design**

### I. Introduction

Pursuant to PG&E's Utility Procedure TD-4127P-02, PG&E is to annually "review the classification of its natural gas transmission pipelines and determine if those have changed since the initial designation." PG&E performed its system-wide verification of pipeline class location designations and provides the results in this report. As an ongoing effort in this annual Class Location review, PG&E continues to make improvements in its evaluation methods and processes for the annual class location study.

### II. Process

The following is a brief summary of the 2012 Class Location process:

- PG&E's contractor obtained orthographically corrected aerial photography taken between February 24, 2012 and April 21, 2012 for all transmission pipelines operating above 60 psig. PG&E provided to its contractor parcel data and geographic information system (GIS) shape files for all pipelines classified as transmission and gas gathering per PHMSA code.
- PG&E's contractor analyzed class locations and provided preliminary documentation (maps and spreadsheets) to PG&E requesting additional information for clarification and preliminary approval. PG&E addressed the contractor's request by reviewing the documentation, surveying pipelines and structures, and investigating the use and occupancy of structures. The contractor then updated their information and provided maps and spreadsheets to PG&E's engineering for final approval.
- PG&E Gas Transmission Engineering and Design (GTE&D) Pipeline Engineers and/or GTE&D Support Engineers reviewed all proposed changes and signed off on the final documents. Pipeline Engineers reviewed the information that resulted in class change ups, and Support Engineers reviewed all segments that resulted in class change downs. Pipeline Engineers performed a quality control review on over 10% of the change down documents signed by Support Engineers.
- Upon approval of a segment change in class; maps, spreadsheets, and shape-files were provided to the PG&E Mapping Group to update GIS with current class location information.

- All segments that changed up in class and were not included in the 2011 Class Location Study were forwarded to the MAOP Validation and Transmission Process Group (MAOP Validation Team) for analysis. The MAOP Validation Team reviewed each segment and its features based on the class and pipe attributes, and created a pipeline features list (PFL) and a summary of each segment. Any pipeline segment proving to be non-commensurate with the existing system was reduced in pressure.
- In accordance with 49 CFR 192.609, a study was initiated on all pipelines where: 1) the segment's class was changed up, and 2) the pipeline operates more than 40% specified minimum yield strength (SMYS) at Maximum Allowable Operating Pressure (MAOP).

### III. Results

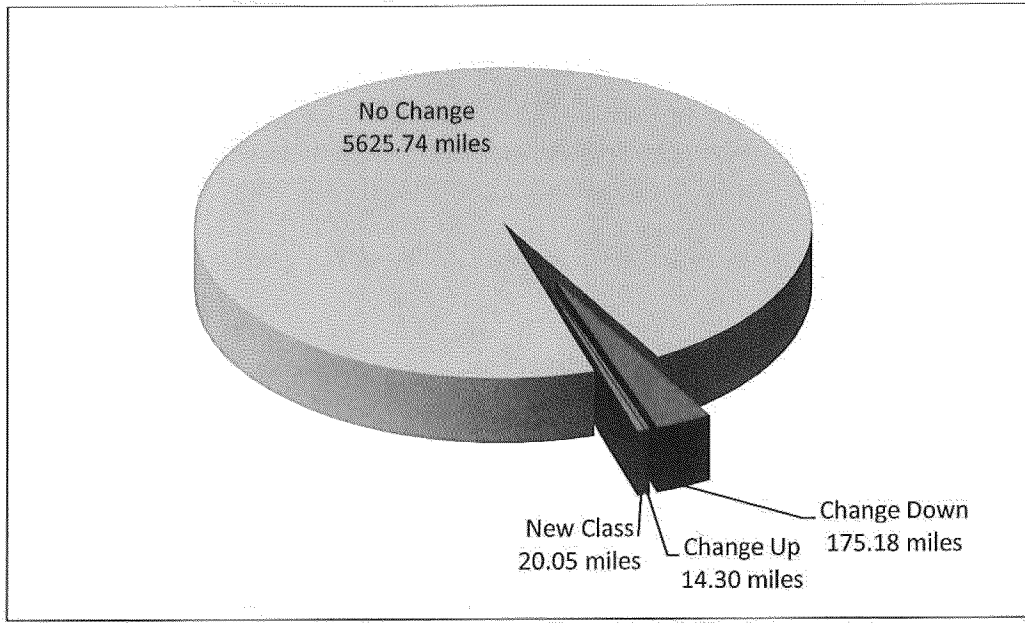
The 2012 Class Location Study identified 14.3 miles of transmission line where the class location was higher than that recorded in PG&E's GIS system. Of the 14.3 miles of change up pipeline, only four segments had an MAOP not commensurate with the new higher class, and one pressure reduction was required; this was due to 270 feet of L-300B that went up in class and had been operating above the new, reduced MAOP. PG&E identified approximately 175 miles of pipeline where the class location was lower than recorded in PG&E's GIS system.

The findings of the 2012 Class Location review are presented below.

Class Status	Miles	Number of Segments	% of System
Change Down	175.18	1,457	3.00%
Change Up	14.30	172	0.25%
New Class	20.05	137	0.34%
No Change	5,625.74	26,536	96.41%
<b>Grand Total</b>	<b>5,835.27</b>	<b>28,302</b>	<b>100.00%</b>

**Table 1: Summary of Total Pipeline**

\* There are 137 segments (20.05 miles) that were not included in the 2011 Class Location Study, and are considered as "New Class". Fifty of the New Class segments (19.75 miles) are new installed pipe that had not yet been mapped in GIS as of February 2011 when PG&E provided the GIS shape-file to its contractor for the previous study. The remaining 87 segments (0.3 miles) were added to GIS since the 2011 study as a result of updates to our database.



**Chart 1: Summary of Total Pipeline Miles**

Original Class to New Class	Miles	Segments
Class 1 to Class 1	3,709.56	12,251
Class 1 to Class 2	7.08	78
Class 1 to Class 3	3.99	52
Class 1 to Class 4	0.00	0
Class 2 to Class 1	49.32	305
Class 2 to Class 2	365.85	1,668
Class 2 to Class 3	3.24	42
Class 2 to Class 4	0.00	0
Class 3 to Class 1	48.31	414
Class 3 to Class 2	77.54	737
Class 3 to Class 3	1,548.87	12,602
Class 3 to Class 4	0.00	0
Class 4 to Class 1	0.00	0
Class 4 to Class 2	0.00	0
Class 4 to Class 3	0.00	1
Class 4 to Class 4	1.46	15
New Class 1	9.57	42
New Class 2	4.22	18
New Class 3	6.27	77
New Class 4	0.00	0
<b>Total</b>	<b>5,835.27</b>	<b>28,302</b>

**Table 2: Class Change Summary**

### **Report of Construction along Pipeline**

In accordance with PG&E's Utility Procedure TD-4127P-01, any construction identified by PG&E along pipelines operating at or over 20% SMYS must be reviewed and documented. To date in 2012, PG&E has initiated 11 reports on construction along transmission pipelines. None of the reported new construction necessitated a change in class location.

### **MAOP Evaluation**

The Support Engineers provided 309 segments that had changed up in class, or required an initial class designation to the MAOP Validation Team for analysis. The results follow.

- **Non-Commensurate Pipe**

L-300B Segment 183.01 (MP 152.46 to MP 152.52) - PG&E identified a section of L-300B that changed from Class 2 to Class 3 due to additional structures identified within the class location unit. PG&E performed a site investigation and confirmed the change in class. The MAOP Validation Team determined that 270 feet of L-300B were not commensurate with the new Class 3 designation.

Corrective Action: The operating pressure was reduced from 573 psig to 477 psig on L-300B between MP 148.91 to MP 161.02. This segment will be hydrotested and is scheduled to be restored to its original operating pressure by the end of this year.

- **MAOP Revisions**

L-114 segment 138 (MP 16.75 to MP 16.86) and L-303 segment 106 (MP 8.00 to MP 8.11) - Segments of parallel lines L-114 and L-303 changed up in class (562 feet and 599 feet respectively) due to inclusion of an existing building extending the class location unit. STA10770 segment 136.5 (MP 16.59 to 16.5908) - This segment of station piping was originally evaluated independently. It is station pipe that connects the upstream and downstream portions of L-114 at the Brentwood Terminal. PG&E now classifies this segment as part of the L-114 class location unit, and therefore assumes the class of L-114 as Class 3.

Corrective Action: The MAOP of L-114 segment 138 was reduced from 595 psig to 497 psig; L-303 segment 106 MAOP was reduced from 793 psig to 720 psig; and STA10770 segment 136.5 MAOP was reduced from 630 psig to 525 psig. The operating pressure of each system was commensurate with the new MAOP resulting from the class change; therefore no pressure reduction was required.

- **Status of MAOP Validation Reviews**

MAOP validation is complete on all segments of pipe that changed up in class. In addition, we elected to validate segments that previously did not have a class location assigned. Four new pipeline projects that are now operational are pending MAOP validation. Preliminary findings indicate the routes are commensurate with the MAOP.

#### **49 CFR 192.609**

Pipeline Engineers must immediately conduct a class location study whenever an increase in population density indicates a change in class location for a segment of an existing steel pipeline operating at hoop stress that is more than 40% SMYS, or indicates that the hoop stress corresponding to the established MAOP for a segment of existing pipeline is not commensurate with the present class location. Of the 172 change up pipeline segments, 62 segments were operating above 40% SMYS. Data was collected for each pipeline and all the segments were reviewed by Pipeline Engineers and found to be commensurate with the present class location and in satisfactory physical condition.

#### **Improvements Made Since the 2011 Class Location Study**

Key procedures and improvements made for PG&E's 2012 Class Location Study follow:

- Developed an electronic tracking system to monitor the incoming and outgoing data.
- Obtained and utilized current orthographically corrected aerial photography.
- PG&E's contractor provided preliminary maps identifying issues to be resolved prior to issuing final maps. PG&E analyzed over 1,876 issues before the final maps were produced. This includes a review of 786 segments of pipe less than 1 mile in length.
- Utilized subject matter experts to analyze preliminary class location information before maps were sent to Pipeline Engineers for approval.
- Completed digitization of structures using 2012 photography, and utilized the information for class location as it became available.
- Provided formal class location training to personnel.
- Included a mapping technician on the class location project team.
- Developed an electronic field occupancy and data validation collection method that was used by field investigators to assist in determining structure use, well defined areas and occupancy.
- Expanded the MAOP analysis to include the pipeline features.

### **Improvements Planned for the 2013 Class Location Study**

PG&E procedures for the 2013 Class Location Study will be similar to that done in 2012 with some improvements:

- Purchase software to perform in-house class location study (however, it is unlikely the tool will be available in time to meet the October 31, 2013 Class Location Study deadline).
- Use information from the PG&E's Pipeline Centerline Project as it becomes available.
- Obtain orthographically corrected aerial photography, and propose reducing 18" pixilation to 12" or 6" for clearer photography.
- Use the digitized structured layer in GIS to assist in performing the 2013 study. PG&E will update this layer with information gathered over the past two Class Location surveys.

### **Conclusion**

PG&E has made considerable improvements in the 2012 Class Location Study, and looks forward to implementing new and better processes in 2013. Should you have any questions regarding this report, please contact me.

Respectfully,



Michael O'Brien  
Manager, GTE&D Support  
Class Location Process Owner