

PG&E's Compliance Plan for NTSB Safety Recommendations

On January 3, 2011, the Commission directed PG&E to comply with two urgent safety recommendations from the NTSB, as follows:¹

1. **Aggressively and diligently search for all as-built drawings, alignment sheets, and specifications, and all design, construction, inspection, testing, maintenance and other related records**, including those records in locations controlled by personnel or firms other than Pacific Gas and Electric Company, relating to pipeline system components such as pipe segments, valves, fittings, and weld seams for Pacific Gas and Electric Company natural gas transmission lines in class 3 and class 4 locations and class 1 and class 2 high consequence areas that have not had a maximum allowable operating pressure established through prior hydrostatic testing. **These records should be traceable, verifiable, and complete.** (P-10-2) (Urgent)
2. **Use the traceable, verifiable, and complete records** located by implementation of Safety Recommendation P-I0-2 (Urgent) **to determine the valid maximum allowable operating pressure, based on the weakest section of the pipeline or component to ensure safe operation**, of Pacific Gas and Electric Company natural gas transmission lines in class 3 and class 4 locations and class I and class 2 high consequence areas that have not had a maximum allowable operating pressure established through prior hydrostatic testing. (P-103) (Urgent) (*emphasis added*)

Safety is our highest responsibility and we intend to fully comply with, and exceed the scope of, the Commission's directives. Where the Commission's directives cover the HCA pipelines without pressure tests, we are validating the MAOPs for all 1,805 miles of HCA pipelines. We are doing so to provide assurance to the public, the Commission and ourselves that our pipelines are operating at safe MAOPs, and that our records accurately reflect the features of these pipelines. As we have said before, any record discrepancy is unacceptable to us.

To date, we have verified those HCA pipelines, as defined in the directives, which have been pressure tested, and we have aggressively and diligently searched for and collected a substantial quantity, but not all, of the records necessary to determine the valid MAOP based on the weakest section or component. To complete PG&E's compliance with these directives, we will proceed with the MAOP validation on the attached schedule.

MAOP Validation Methodology: For purposes of the MAOP validation, we have defined "traceable, verifiable and complete" records as original records containing information about the material properties of the mainline pipe and all pipeline appurtenances and components. Such records must be tied to the specific segment of pipe under examination and must contain information that is consistent with PG&E's procurement practices at the relevant time.

¹ The Commission ratified these directives in Resolution L-410 (January 13, 2011).

For many of our older pipelines, we do not believe we will find “traceable, verifiable and complete” records of every component. Therefore, we are making assumptions about certain components, such as fittings and elbows, based on the material specifications at the time those materials were procured, sound engineering judgment, and conducting excavation and field testing of pipeline systems as appropriate. We will determine what field testing to use on a case-by-case basis from such techniques as X-ray or camera inspection of welds and measuring yield strength using Advanced Technology Corporation’s Automated Ball Indentation technique.

We will consult with Commission staff about the assumptions we are making and the basis for those assumptions as well as any field testing we propose. We will consider any recommendations made by Commission staff. We will provide the Commission staff as much notice as practical of any field testing.

The information from PG&E’s traceable, verifiable and complete documents is combined with engineering analysis and any necessary assumptions and field-testing, to create a Pipeline Features List (PFL). The PFL is a comprehensive reference of all necessary characteristics of the pipeline segment and appurtenances. The PFL will specify: (1) the weakest element of the segment of the pipeline as defined by the 49 CFR § 192.619(a)(1); (2) the criteria by which PG&E made this determination; and (3) whether this determination is based on traceable, verifiable and complete documents relating to the specific pipeline segment, or based on PG&E’s assumptions. If the determination is based on assumptions, each must be identified. The PFL also will identify all source documents for the data in the PFL, including but not limited to as-built drawings. All such documents will be available in our electronic databases. We will provide the CPUC staff with access to these databases at its request.

The PFL information is then used in the MAOP calculation. This calculation shall be based on the weakest element of the pipeline segment. Any MAOP calculation based on assumptions will be identified as such, along with all assumptions. In no case will a MAOP increase as a result of this calculation.

We understand the Commission staff is reviewing both the draft MAOP validation report and the sample PFL we attached to our March 21st supplement, and will advise us within ten (10) days if they believe we should make any changes in our approach to the MAOP validation. If the staff recommends changes, implementation may require an adjustment to our work plan since we have already started the work with the approach outlined.

Reporting, Review and Authority to Reprioritize Work: Attachment A is PG&E’s prioritization and work plan, identifying our priorities, and the schedule on which we plan to complete the MAOP validation. We will submit monthly reports to the Commission on our progress toward meeting the Commission’s directives and completing Steps 1 and 2 in all Priorities 1 through 6, and will include, for the relevant priority pipeline segments and appurtenances, the following:

- 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”** (MAOP Validation Step 1)

- Status of compilation of the PFL (MAOP Validation Step 2)
 - Identification of all assumptions made in completing the PFL
 - Identification of all field work planned, underway and executed in order to complete the PFL, and the results of all field work
- 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”** (MAOP Validation Step 3)
- Summary of Quality Assurance/Quality Control recommendations and resulting process changes
- Discussion of any change PG&E makes to the transmission pipeline system as a result of any of the MAOP validation work.

We will meet with the Commission staff to review each monthly report. In addition, the Commission staff is encouraged to visit our MAOP validation headquarters in Walnut Creek at any time to review our operations and progress.

The need for reprioritization may be raised and discussed at any time by either the CPUC and its staff or PG&E. If PG&E believes it needs to reprioritize any of the work in the work plan, we will meet with the Commission staff to review necessary changes and the factors behind the changes. In order to efficiently change or add to Priorities 1 through 6, the Executive Director should be delegated authority by the Commission to authorize any necessary reprioritization to the work plan contained in this Compliance Plan.

Safety Concerns: The fundamental goal of this exhaustive exercise is to provide the public, the Commission and ourselves with as much information as possible to be assured of our gas pipeline system safety. As part of the MAOP validation process, it is our engineers’ responsibility to raise any safety concerns they identify for appropriate immediate action. We will not wait until the MAOP validation process is complete to take any necessary action to ensure the safety of our pipelines. We have empowered our engineers to raise any issues they become aware of with their immediate supervisor, with the officer in charge of the MAOP validation work (Kirk Johnson) or through the Company’s hot line. We have a team of engineers available who are qualified to assess any situation where an employee raises a safety concern and have empowered them to take direct action as a result. Depending on the circumstances, these actions may include: reprioritization of work, pressure reduction, pressure test or other inspection, replacement or abandonment of pipe.

PG&E shall promptly reimburse the Commission for any expenses or costs for consultants or experts retained by the Commission for implementing, monitoring and enforcement of this Compliance Plan.

We will promptly notify the Commission’s Executive Director and the Director of Consumer Protection and Safety in writing of any safety concern that is raised and keep the Commission

staff informed of the result of our assessment of it, including any action taken in response to the concern.

Pacific Gas and Electric Company

By _____
[Name, title]