PACIFIC GAS AND ELEC TRIC COMPANY

CHAPTER 1

INTRODUCTION AND OVE RVIEW

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We at PG&E are deeply sorry for the tragic accident in San Bruno on September 9, 2010. It was our pipeline that ruptured and exploded because of a defective 4-foot piece of pipe that should never have been put in service. While we cannot undo that, we have accepted responsibility and acknowledged our liability to those injured.

In the aftermath of San Bruno, with the encouragement and direction of the Commission, we took a number of immediate steps to ensure gas system safety. We reduced the pressure on all the Peninsula transmission pipelines. We conducted a special system-wide leak survey. We instituted additional ground patrols on the Peninsula. We later reduced pressure on other pipelines that had pipe similar to that involved in the San Bruno accident. We announced our own Pipeline 2020 program to modernize and upgrade our gas transmission system, which, after the Commission's mandate in D.11-06-017, has been superseded by our August 26, 2011 Pipeline Safety Enhancement Plan (PSEP). We embarked on an unprecedented document review to validate the maximum allowable operating pressure (MAOP) on our high consequence area (HCA) pipelines and undertook an ambitious program to hydro test the pipe with characteristics similar to that in San Bruno. We wholeheartedly supported the Commission's gas safety rulemaking (R.11-02-019), including advocating the elimination of grandfathering of MAOPs.

At the same time that we reached out to the San Bruno community, we started to take a hard look inward. Historically, PG&E had been one of the finest utilities in the country, known for its operational excellence. How, we asked ourselves, can we make sure such an accident will never happen again on our system?

The accident and the fact that our records incorrectly identified the pipe that ruptured as seamless when, in fact, it had a longitudinal seam, led the National Transportation Safety Board (NTSB) and the Commission also to put our gas operations under a microscope. That scrutiny has revealed issues that we need to address, and we are doing so. We understand that we can and must do a better job in our gas operations.

To that end, we have taken significant and substantial steps to make such improvements a reality. To enhance the focus on our gas operations, we split our

gas and electric businesses into separate divisions. Our gas operations are now headed by a new Executive Vice President who joined us from National Grid.[1] We completed the MAOP validation of more than 2,000 miles of HCA pipelines, and will complete the same rigorous process for the remaining approximately 3,800 miles of transmission pipeline by early next year. Last year we completed hydro testing on 164 miles of ~~HCA~~ pipeline. Under our proposed Pipeline Safety Enhancement Plan, we plan to strength test another ~~546~~ 569 miles of pipe, replace 186 miles of pipe, and install approximately 200 automated valves by the end of 2014. In addition, we have revised internal work procedures and policies, and have provided renewed training to our gas employees. As these and other actions demonstrate, our primary focus is on safety throughout our gas operations.

We acknowledge that our gas system operations were not what we, the Commission, our customers, and the public expect. However, the allegations of the Consumer Protection and Safety Division (CPSD) are excessively broad.[2] They create the false impression of an organization in which no one ever did anything right. As summarized by the Commission:

> "CPSD's investigation alleges that the incident in San Bruno was caused by PG&E's failure to follow accepted industry practice when installing the section of pipe that failed, PG&E's failure to comply with federal pipeline integrity management requirements, PG&E's inadequate record keeping practices, deficiencies in PG&E's data collection and reporting system (known as Supervisory Control and Data Acquisition, or SCADA), inadequate procedures to handle emergencies and abnormal conditions, PG&E's deficient emergency response actions after the incident, and a systemic failure of PG&E's corporate culture that emphasized profits over safety." (Order Instituting Investigation, I.12-01-007, January 12, 2012, at 2.)

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[1] We provide additional details of our organization changes in Chapter 13.

[2] Rather than adopt the NTSB report, CPSD conducted its own investigation and has made allegations of violations based on its own theories. It is to those allegations that we respond in this testimony.

We now know that the cause of the September 9th rupture and explosion was a piece of pipe that did not meet any known PG&E or industry specification and that was missing an interior longitudinal weld. The exterior weld experienced a ductile tear which, over the course of 50 years in service, grew to the point that the pipe ruptured. A PG&E crew installed that piece of pipe 55 years ago. We have no records establishing where that pipe came from; it obviously did not go through a pipe-mill hydro test as called for by PG&E's specifications at the time. Nor do we have records showing a pre-service hydro test, although a former PG&E employee remembers one at about the location of the rupture.

We acknowledge that the piece of pipe that ruptured was defective and should not have been in the ground. We are responsible for that piece of pipe being there and for the consequences that resulted. However, we do not agree with many of the alleged deficiencies identified in CPSD's report, and asserted in the testimony submitted by intervenors, and do not agree that such claims support the violations of law CPSD has alleged.

In the following chapters, we respond to the violations CPSD alleges as well as assertions made in the testimony of the intervening parties. Our testimony comes from our own personnel, as well as industry experts with substantial pipeline knowledge and experience. For clarity, our testimony is generally organized along the same lines as the discussions in the CPSD Report.

In Chapter 2, we address the 1956 construction of Segment 180. Chapter 3 is the testimony of Robert Caligiuri, Ph.D., an expert metallurgist, regarding the pipe in Segment 180 and the root cause of the rupture. Mr. Caligiuri concludes that the pipe failure resulted from a sequence of three things, all of which together led to the September 9, 2010 rupture: (1) a missing interior weld; (2) a ductile tear; and (3) fatigue cracking that grew from the ductile tear slowly over time, reducing the pressure that could trigger a failure at that location to about 386 psig – below the 400 psig MAOP of Line 132.

Chapter 4 discusses our integrity management practices, both generally and with respect to Line 132 and Segment 180. While CPSD today alleges that our Integrity Management program violated a number of regulations, when CPSD audited our integrity management program in May 2010 – just four months before the San Bruno accident – it did not identify these violations. In Chapter 5, John Zurcher, an expert in integrity management and a long-time member of the

committee that established and revises the ASME B31.8S standards, discusses our Integrity Management program and historical practices, both generally and related to Line 132, Segment 180, and concludes that they were consistent with historical industry practice and the regulations. In Chapter 6, John Kiefner, also a leading expert in pipeline integrity issues, addresses the treatment of cyclic fatigue in the natural gas industry, pointing out that, before San Bruno, the industry did not consider cyclic fatigue to be a serious threat.

Chapter 7 responds to the assertions regarding PG&E's records and recordkeeping practices related to Segment 180.

Chapter 8 addresses allegations about the Milpitas Terminal and our Supervisory Control and Data Acquisition (SCADA) system. In Chapter 9, Thomas Miesner, an industry expert in SCADA systems, provides an industry perspective on the issues related to PG&E's SCADA system and the Milpitas Terminal local control system. Mr. Miesner concludes that our SCADA system, including the Milpitas Terminal local control system functioned appropriately, and the actions of our gas system operators were reasonable and consonant with industry norms.

Chapter 10 discusses our gas emergency response plan, the response to the events on September 9, 2010, and our efforts since San Bruno to enhance our emergency preparedness and public outreach, including the development of a new emergency response plan. In Chapter 11, David Bull, an industry expert on emergency plans and emergency response, who teaches courses for the Pipeline and Hazardous Materials Safety Administration (PHMSA), testifies that PG&E's emergency plan complied with the gas safety regulations and was consistent with industry practices, and our response on September 9, 2010 was reasonable.

Our response to the budget/safety culture issues raised by Overland Consulting's focused audit is contained in the testimony of Joseph Martinelli, an energy industry consultant with extensive experience in utility budgeting and forecasting, and the report of Matthew O'Loughlin of the Brattle Group. Mr. Martinelli's testimony in Chapter 12 shows that budget constraints did not lead to any change in the assessment methods used on Line 132. Mr. O'Loughlin, whose report is provided separately, conducted an independent analysis of our spending on our gas transmission business and concluded, contrary to Overland's analysis, that we spent more than the expense and capital amounts adopted in the rate cases.

Lastly, Chapter 13 describes the actions we have taken, and continue to take, to improve our gas system. Additionally, we respond to the recommendations CPSD made in its report.[3]

Our testimony demonstrates (1) that most of the purported deficiencies identified in the CPSD report and the intervenor testimony are not in fact deficiencies, or are much less severe than alleged, and in either event do not constitute violations of state or federal law; (2) that we recognize that areas within our gas systems and operations were not as good as they could have been prior to September 9, 2010; and (3) that we are taking seriously our obligation to fix shortcomings and ensure that safety is maintained as a top priority.

[3] CPSD's "Description of Incident," Section III in the CPSD report, is a thorough discussion of the events that occurred on September 9, 2010, thus we do not submit a separate chapter addressing the incident. Where further detail or elaboration regarding the events may be helpful, we include such discussions within the applicable chapter.