Docket:	:	A.11-11-002
Exhibit Number	:	
Reference #	:	ORA-1-RH2-Redacted
Commissioner	:	M. Florio
ALJ	:	D. Long
Witness	:	N. Skinner

OFFICE OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

ORA Report on the Proposed Natural Gas Pipeline Safety Enhancement Plan of Southern California Gas Company and San Diego Gas & Electric Company

REDACTED VERSION

Testimony on Costs to Pressure Test Pipeline Installed Between 1956-1961

San Francisco, California
May 1, 2015

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Testimony on Sempra Practices for Pressure Testing

I. INTRODUCTION

This exhibit presents the analyses and recommendations of the Office of Ratepayer Advocates (ORA) regarding Southern California Gas Company's (SoCalGas) and San Diego Gas & Electric's (SD&GE)'s [collectively "Sempra"][1] practices regarding pressure testing in 1956 through 1961 for purposes of cost assignment between ratepayers and shareholders, consistent with Administrative Law Judge Long's Ruling of April 16, 2015.

Specifically, this exhibit addresses the need for Sempra shareholders to pay for pressure testing of any pipeline installed between 1956 through 1961 for which Sempra does not have adequate records. Sempra ratepayers would have been assigned the costs for pressure testing the pipeline installed in that period. They should not be required to pay those costs again.

II. SUMMARY OF RECOMMENDATIONS

The burden of proof rests on Sempra to demonstrate conclusively that they did not receive rate recovery for pressure testing pipelines in accord with American Standard Association (ASA) standards. Sempra has not met this burden of proof, and in fact Sempra (or its predecessors) represented to the Commission in 1958-1960 that they followed the ASA standards and there was no need for a General Order. Sempra went even further and recommended that the Commission adopt even more stringent and sweeping standards. The Commission did so. Evidence provided by Sempra in this proceeding demonstrates that for the supermajority of their pipelines, there is evidence of pressure testing in the period of 1956-1961 and that Sempra

[1] Sempra by the 1980s had merged with many companies in southern California. For more details see http://www.socalgas.com/news-room/company-history.shtml

maintained sufficient records of those tests in part to determine the order and scale of further pressure testing, replacement, or other needs to maintain and demonstrate the safety and reliability of their natural gas system.

III. GENERAL OVERVIEW

A. Procedural Background

Decision (D.) 15-03-049 was the decision in the rehearing of D.14-11-021, which, in turn, was a rehearing of D.14-06-007. D.14-06-007 did not require Sempra shareholders to pay for pressure testing costs for pipe installed between 1956 to 1961, triggering the rehearing requests. On April 16, 2015, ALJ Long issued a ruling setting the procedural schedule and establishing a limited scope:

> Therefore, in consultation with the assigned Commissioner, pursuant to the directive in the Second Rehearing Decision, this ruling adopts a procedural schedule for TURN and any other interested party to serve testimony and produce any and all evidence to show the utilities' then practices for pressure testing, and, whether SDG&E and SoCalGas recovered costs in revenues to pressure test pipelines installed between 1956 and1961, as asserted in the two rehearing applications.
>
> TURN and any other interested party must include or attach any and all evidence addressing SDG&E and SoCalGas' practices, cost recovery, or other questions that they propose the Commission consider in its testimony. We allow SDG&E and SoCalGas an opportunity to serve rebuttal testimony and the companies must also include any and all evidence they propose the Commission consider in the rebuttal. All proposed testimony regarding the alleged evidence must include complete citations and references to its source, origin, and reliability. [2]

The ruling then orders:

[2] ALJ's Ruling Setting a Procedural Schedule As Ordered By Decision 15-03-049, p. 2.

The Utility Reform Network and any other interested party must serve testimony, as permitted by Decision 15-03-049, the Second Rehearing Decision, to show the utilities' then practices for pressure testing, and, whether San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company (and SoCalGas) recovered costs in revenues to pressure test pipelines installed between 1956 and1961, as asserted in the two rehearing applications.[3]

B. Historical Background

In the aftermath of the rupture of the natural gas transmission pipeline in San Bruno, and the disastrous fire that followed, it became apparent that, in addition to its other failings, PG&E had not created and/ or maintained accurate and accessible records of its natural gas system equipment and facilities.[4] These concerns about record-keeping extend to other utilities in

[3] ALJ's Ruling Setting a Procedural Schedule As Ordered By Decision 15-03-049, Ruling, p. 3.

[4] See California Public Utilities Commission, Consumer Protection and Safety Division, Incident Investigation Report, September 9, 2010 PG&E Pipeline Rupture in San Bruno, California, released January 12, 2012 (CPSD San Bruno Report), p. 3. The CPSD San Bruno Report was supplemented and submitted as CPSD's testimony in I.12-01-007 on March 16, 2012.

See also National Transportation Safety Board, Pipeline Accident Report, Pacific Gas and Electric Company, Natural Gas Transmission Pipeline Rupture and Fire, San Bruno, California, September 9, 2010, adopted August 30, 2011, pp. xi and 59-66 (NTSB Report). The NTSB Report is available at http://www.ntsb.gov/doclib/reports/2011/PAR1101.pdf. The NTSB found that PG&E's pipeline integrity management program, which should have ensured the safety of the system, was deficient and ineffective because its data was inaccurate and incomplete, it was missing mission critical information, and it was not designed to consider the most relevant information – such as pipeline design, materials, and repair history – when determining how to prioritize repairs and replacements. As a result, the NTSB concluded that PG&E's integrity management program "led to internal assessments …. that were superficial and resulted in no improvements." NTSB Report, p. xi.

See also The Report of the Independent Review Panel – San Bruno Explosion – Prepared for California Public Utilities Commission, Revised Copy June 24, 2011, pp. 7-8, available at http://www.cpuc.ca.gov/NR/rdonlyres/85E17CDA-7CE2-4D2D-93BA-B95D25CF98B2/0/cpucfinalreportrevised62411.pdf

California. Within California, this led to the series of Commission rulemakings and decisions on Pipeline Safety Enhancement Plans (PSEPs) for Pacific Gas and Electric (PG&E), Sempra, and Southwest Gas (SWG).

Sempra stated in comments on the proposed decision, which became D.14-06-007, that:

> …while SoCalGas and SDG&E, as industry leaders in promoting pipeline safety, voluntarily conducted pressure testing during this era, the standards did not require them to retain records of all pressure tests. Nor were they put on notice that a failure to retain such records would result in financial penalties over fifty years later.[5]

As discussed in Section E, below, there is ample evidence that Sempra had a routine policy of pressure testing pipeline in this system, even on pipe operating below 30% Specified Minimum Yield Strength (SMYS). The Commission should hold utilities accountable for their statements and promises of following industry standards and best practices.

C. ASA Standards 1955, 1958, and 1961

The ASA standards for pressure piping in 1955 provided the mold for modern pipeline codes and standards.

1. Pipe operating above 30% SMYS.

In the 1955 standards, requirements were established to pressure test all pipe operating above 30% of SMYS.[6] There are two exceptions to hydrotesting pipe operating above 30% SMYS. First, Class 3 and 4 locations may be exempted 1) if the ground temperature could go below freezing or 2) water of satisfactory quality is not available.[7] If these conditions occur, § 841.413(c) requires a pressure test with air to 1.1 times the maximum

[5] Sempra comments on Proposed Decision Approving PSEP, p. 2.

[6] ASA B.31.1.8-1955, § 841.4 generally, and Table 841.412(d).

operating pressure. Second, Class 3 and 4 locations may be pressure tested with air, so long as all of the following requirements are met:[8]

a. the maximum hoop stress during test is less than 50% and 40% SMYS for Class 3 and 4 locations respectively;
b. the maximum pressure at which the pipeline will be operated does not exceed 80% of the test level; and
c. the pipe involved is new pipe with a longitudinal joint factor of 1.00.

2. Pipe operating below 30% SMYS and above 100 psi.

For pipeline operating above 100 psi and below 30% SMYS, ASA also had pressure testing requirements.[9] Class locations 2, 3, and 4 were required to be pressure tested to at least 1.5 times the maximum operating pressure.[10] Class 1 locations did not have the same "shall" language as Class locations 2, 3, and 4, but Table 841.421 does provide for maximum hoop stresses permissible during test. However, leak tests were required on all pipelines after construction.[11]

3. Records Requirements

Without differentiation to the operating pressure of a pipe, the 1955 standards clearly required maintaining records of pressure testing:

> Records. The operating company shall maintain in its file for the useful life of each pipeline and main, records showing the type of fluid used for test and the test pressure.[12]

(continued from previous page)

[7] ASA B.31.1.8-1955, § 841.413 (a) and (b).

[8] ASA B.31.1.8-1955, § 841.416.

[9] ASA B.31.1.8-1955, § 841.42 generally, and Table 841.421.

[10] ASA B.31.1.8-1955, § 841.42.

[11] ASA B.31.1.8-1955, § 841.43.

[12] ASA B.31.1.8-1955, § 841.417.

D. Sempra Compliance with ASA Standards

Sempra has stated it complied with, and, indeed helped further, the adoption of the ASA in California. As stated in response to ORA discovery, Sempra and its predecessors were "key stakeholders and participants in the development of industry standards".[13] While "asserting that no general order on this subject is necessary … and that the gas utilities voluntarily follow the American Standards Association (ASA) code for gas transmission and distribution piping"[14], Sempra's "proposal covered not only gas transmission pipeline systems but also gas distribution pipeline systems."[15] As discussed in D.61269:

> It was the further position of Pacific Gas and Electric Company, San Diego Gas & Electric Company and the Pacific Lighting Group that if the Commission should determine that a general order governing gas pipeline systems is necessary, the interests of the Commission, the public and the utilities would be best served by the adoption of the ASA Code as proposed by the Pacific Lighting group or in some other manner including both transmission and distribution.[16]

ORA has located documentation from PG&E confirming the statements in D.61269:

> PG&E and Pacific Lighting Group both testified that they follow the ASA Code (R.T. 202; 397; 432)….[17]

The Decision commended the utilities for their practices in following national standards.[18] The Decision notes that some respondents claimed

[13] Sempra Response to DRA-DAO-27, Q4a.

[14] D.61269, p. 3.

[15] D.61269, p. 2.

[16] D.61269, p. 4.

[17] Statement of Pacific Gas and Electric Company in Case No. 6352 (which led to D.61269), p. 1.

"some of its provisions impose upon the utilities an additional expense that is not commensurate with any improvement in service or safety."[19]

Pacific Lighting Group's recommendations were primarily modifications to the ASA-1958 standards,[20] including making some non-mandatory provisions mandatory, but with no called out change to pressure testing requirements. As shown in the ASA 1955 standards, the pressure testing sections were mandatory, using the term "shall" instead of permissive words like "may" in their text.[21]

Ultimately, the Commission adopted the Pacific Lighting Group proposal with some modifications.[22] The additional provisions made mandatory by the Commission did not include section 841.4, likely because it was already mandatory.[23]

E. ORA's Analysis and Recommendation

Absent evidence from Sempra that their shareholders bore the costs for pressure testing pipe from 1955-1961, ratepayers would have paid to pressure test pipe in accord with then-current standards for gas transmission and distribution pipeline. Pressure testing pipe was unquestionably a requirement associated with compliance of the ASA 1955 and 1958 standards.

(continued from previous page)

[18] D.61269, p. 6.

[19] D.61269, p. 9.

[20] The 1958 standards for purposes of pressure testing are identical to the 1955 standards, see attached summary spreadsheet.

Cells shaded in that spreadsheet show where standards changed in that current year. For example, there were extensive changes in pressure testing requirements starting in 1955 as compared to previous years, so the cells under 1955 have been shaded.

[21] ASA B.31.1.8-1955, § 841.4 generally.

[22] D.61269, Finding and Conclusion 3, p. 11.

[23] D.61269, Finding and Conclusion 4, p. 11.

Analysis of Sempra's response to DR-DRA-16 Q6 reveals that out of Sempra's pipelines installed between 1956 and 1961, Sempra has, for XXX% of all segments (representing XXX% of installed miles), some form of records for the test date, pressure, medium, and duration.[24] A further XXX segments (or XXX% of installed miles) have records of test pressure, medium, and duration, but not the test date. Of all the nearly XXX miles of pipe installed between 1956-1961, Sempra only lacked some indication of pressure testing on a mere XXX miles.[25]

Table 1-1 (Redacted)
Sempra Records of Pressure Tests, 1956-1961

	Segments	Segment Feet
All Mileage (1)		
No Records (2)		
ORA Analysis 1956-1961		
Complete Record (3)		
Pressure, Medium, and Duration (4)		
Other (5)	0	0
Total	**0**	**-**

(1) Column R (Install_Date) filtered to contain only 1956 to 1961.

(2) Test Date, Test Pressure, Test Medium, Test Duration all filtered to "Unknown" or "Blank"

(3) Test Date between 1/1/1956 and 6/30/1961. Test Pressure, Test Medium, Test Duration all filtered to exclude "Unknown" or "Blank".

(4) Test Date included "Unknown" or "Blank". Pressure, Medium, and Duration all had values other than "Unknown" or "Blank".

(5) Any other grouping of data where there was some form of record.

[24] Sempra Response to DRA-DAO-16. This data request response has been marked confidential by Sempra. The calculations above are derived from the spreadsheet response, with data sorted and counted via filters. All calculations were done after filtering for only pipeline installed in 1956-1961 [inclusive].

[25] [REDACTED].

Table 1-1 clearly demonstrates that Sempra was voluntarily complying with the requirements under the ASA standards of the period since XXX% of the mileage of pipe installed met the record keeping requirements of test fluid and pressure.[26] Even for pipeline operating below 30% SMYS, Sempra has evidence of pressure testing XXX% of the segments and XXX% of the XXX miles installed in this period, as demonstrated in Table 1-2:

Table 1-2 (Redacted)
Sempra Records of Pressure Tests, 1956-1961
Pipe less than 30% SMYS

	Segments		Segment Feet	
All Mileage (1)				
No Records (2)				
ORA Analysis 1956-1961				
Complete Record (3)				
Pressure, Medium, and Duration (4)				
Other (5)	0		-	
Total	**0**		**-**	

(1) Column R (Install_Date) filtered to contain only 1956 to 1961. Column K (Percent_SMYS) filtered to contain only pressures less than 30% SMYS.

(2) Test Date, Test Pressure, Test Medium, Test Duration all filtered to "Unknown" or "Blank".

(3) Test Date between 1/1/1956 and 6/30/1961. Test Pressure, Test Medium, Test Duration all filtered to exclude "Unknown" or "Blank".

(4) Test Date included "Unknown" or "Blank". Pressure, Medium, and Duration all had values other than "Unknown" or "Blank".

(5) Any other grouping of data where there was some form of record.

Therefore, Sempra's shareholders should be responsible for the costs associated with any records Sempra failed to maintain for pipeline installed between 1955 and 1961.

[26] See attached ASA spreadsheet.

1. Data Quality

In accord with ALJ Long's directive to provide references to the source, origin, and reliability of proposed testimony, ORA provides the following list:

American Standard, Gas Transmission and Distribution Piping Systems, Section 8 of American Standard Code for Pressure Piping (ASA B31.1-1955), ASA B.31.1.8, UDC 621.64.002.1/.2.
Source/Origin: American Standards Association
Reliability: Highest quality. ORA is unaware of anyone challenging the authenticity of this document.

Excerpts from Ex. DRA-9 in A.11-11-002 (Sempra responses to DRA-DAO-27). (Referred to in this document as Sempra Response to DRA-DAO-27).
Source/Origin: Sempra.
Reliability: The discussion in Sempra's response to ORA's data request is believed to be reliable. ORA does not dispute the assertions made in this data response, and the assertions align with ORA's knowledge of the ASA Standards and the members involved in their creation in the 1940s and 1950.

Decision (D.) 61269, adopting General Order (GO) 112.
Source/Origin: Decision from the Commission's online repository of past decisions.
Reliability: ORA does not believe D.61269 contains any errors or misrepresentations of parties' positions.

Statement of Pacific Gas and Electric Company in Case No. 6352 (which led to D.61269).
Source/Origin: PG&E Gas Transmission Records Order Instituting Investigation, CPUC DR 15 Q6 Atch 4 (Redacted); from PG&E Law Department.
Reliability: The document has paperwork certifying it was served on all parties of record in that proceeding, and has reference to transcript citations.

GO 112, Public Utilities Commission of the State of California.
Source/Origin: PG&E Law Department, copy of GO 112. Provided to ORA during cross-examination in Application 13-12-012, PG&E's 2015 Gas Transmission and Storage case.
Reliability: ORA believes this is a true and accurate copy of GO 112. This document was used during cross-examination and its authenticity was not challenged.

Sempra Response to DR-DRA-16 (Confidential).
Source/Origin: Sempra.
Reliability: ORA does not believe that Sempra provided false information to it during discovery. While this response is several years old, the time since its provision and today likely indicates that more data would be available, possibly reducing the unknown values.

ASA Spreadsheet.
Source/Origin: Nathaniel Skinner, ORA.
Reliability: This document, with only slight modifications since then, was used during cross-examination of Mr. Skinner in PG&E's 2015 GT&S proceeding (A.13-12-012). It is designed as a reference document with cross-references to the specific ASA, GO 112, and Code of Federal Regulations codes up through the adoption of the Code of Federal Regulations.

IV. WITNESS QUALIFICATIONS

Q.1 Please state your name and business address.

A.1 My name is Nathaniel W. Skinner. My business address is 505 Van Ness Avenue, San Francisco, California, 94102.

Q.2 By whom are you employed and in what capacity?

A.2 I am employed by the California Public Utilities Commission as a Program and Project Supervisor in the Office of Ratepayer Advocates Energy Cost of Service and Natural Gas Branch.

Q.3 Briefly describe your educational background and work experience.

A.3 I have a MA degree in International Policy Studies from the Monterey Institute of International Studies, a BA in Political Science and a BA with

Distinction in Scandinavian Area Studies from the University of Washington. I am currently a PhD Candidate in Public Policy and Administration at Walden University.

Since joining the Commission in 2006, I have worked on various matters in an advisory role with the Commission's Energy Division primarily in the area of Long Term Procurement Planning for electric resources including reviewing models and assumptions for renewable energy integration. Since transitioning to ORA in 2013, I have worked on the General Rate Case OIR (R.13-11-006), the PG&E Orders to Show Cause issued August 2013, PG&E's PSEP Update Application (13-10-017), General Order 112-E, Southern California Gas's North-South Project Application (13-12-013), and various issues related to Natural Gas Transmission Safety Plans in R.11-02-019 and its successor proceedings.