SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY

CERTIFICATE OF PUBLIC CONVENIENCE & NECESSITY FOR THE PIPELINE SAFETY & RELIABILITY PROJECT - CPCN

(A.15-09-013)

(2ND DATA REQUEST FROM TURN)
Date Requested: November 9, 2015
Date Responded: November 25, 2015

QUESTION 1:

Re. PEA, p. 5-9: What were the reasons for replacing 3.8 miles of the original 1949 pipeline (Line 1600)?

a. What were the dates and amount of pipe replaced on each of those dates?
b. If the pipeline replacement was because of a failure, leak, rupture, damage, please
    i. provide the specifics and a root cause analysis or other investigation if one was performed.
    ii. Explain what mitigative actions were taken, if any.

RESPONSE 1:

a. The table below shows the dates and length of pipe (in feet) replaced.

DATE_INSTALLED	LENGTH_FT	LENGTH_MI
4/16/2013	2	0.0
4/20/2009	1,212	0.2
3/26/2006	8	0.0
2/12/2004	388	0.1
9/17/1999	109	0.0
10/13/1995	629	0.1
8/2/1994	101	0.0
7/30/1993	2,339	0.4
4/22/1993	566	0.1
5/7/1987	1,026	0.2
11/22/1985	2,233	0.4
10/14/1983	166	0.0
6/10/1983	1,451	0.3
10/2/1982	379	0.1
9/22/1982	1,509	0.3
6/1/1982	15	0.0

5/27/1981	2,371	0.4
9/18/1979	2,542	0.5
1/1/1970	218	0.0
9/5/1969	418	0.1
9/30/1966	14	0.0
6/25/1965	26	0.0
11/6/1964	99	0.0
5/3/1962	1,222	0.2
7/26/1961	819	0.2
3/3/1953	129	0.0
1/1/1952	98	0.0
	Total	**3.8**

b. The reasons for the replacement of the 3.8 miles in the PEA, p. 5-9 include: main line valve installation, third-party damage, relocation, and unspecified.

   i. No specific investigations are available.

   ii. For the third-party damage related replacements, the replacement itself is the mitigative activity.

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QUESTION 2:

What is the repair history on the pipeline from installation to date? Please provide a log of all repairs and/or major work conducted on Line 1600.

RESPONSE 2:

SoCalGas and SDG&E object to this request on the grounds that it is unduly burdensome and not reasonably calculated to lead to the discovery of relevant evidence. A comprehensive log of all repairs from the time of installation is not readily available and would require SoCalGas and SDG&E to search through voluminous paper records. Subject to and without waiving these objections, SoCalGas and SDG&E respond as follows:

The repair listing attached provides a description of the repair and the repair date from records that are readily available.

TURN DR 2 Q2 attachment.xlsx

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QUESTION 3:

When was cathodic protection provided to the pipeline and has there been a history of low readings or external corrosion leaks or ruptures?

RESPONSE 3:

Cathodic protection (CP) was provided to Line 1600 in 1949. Available CP records from 1994 through 2014 do not demonstrate a history of low cathodic protection on the pipeline. Additionally, there have been no leaks or ruptures associated with external corrosion.

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QUESTION 4:

Has SDG&E considered performing the hydrostatic testing on Line 1600 in the months that the load for large users can be supplied by other means or via moving gas from other pipelines?

RESPONSE 4:

Yes.

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QUESTION 5:

Can Line 1600 be risk ranked by segment and tested in a way that the highest risk segments are first and lowest risk segments are at the end of the period?

RESPONSE 5:

Yes.

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QUESTION 6:

Does SDG&E have the mill test reports on all of the pipe installed on Line 1600?

RESPONSE 6:

No.

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(2ND DATA REQUEST FROM TURN)
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QUESTION 7:

Does SDG&E know the manufacturer and seam types on all of the pipe segments on Line 1600?

RESPONSE 7:

No.

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(A.15-09-013)

(2ND DATA REQUEST FROM TURN)
Date Requested: November 9, 2015
Date Responded: December 7, 2015

QUESTION 8:

Please provide copies of all integrity management reports including testing results (pressure tests, ILI results, DA results) and any repairs and/or replacements made, root cause analyses, and other reports regarding the condition and integrity of Line 1600.

RESPONSE 8:

All of the attachments responsive to this question contain confidential information that will be submitted upon execution of a Nondisclosure and Protection Agreement between TURN and SoCalGas/SDG&E.

Question 2 of TURN DR 02 submitted on November 25, 2015 contains the repairs/replacements made as a result of assessment findings.

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QUESTION 9:

Please provide a detailed risk ranking of each segment on Line 1600 and how these ranking compare to other SDG&E gas transmission pipelines.

RESPONSE 9:

A description of the risk ranking provided as part of the Utilities' PSEP can be found in "Testimony of Southern California Gas Company and San Diego Gas & Electric Company in Support of Proposed Natural Gas Pipeline Safety Enhancement Plan" filed on August 26, 2011, page 70:

> *The rank order for detailed project planning will be based upon the potential impact radius for each pipeline segment divided by its long seam factor. This approach is consistent with pipeline risk principles, where risk is commonly defined as the product of the likelihood of failure (LOF) and the consequence of failure (COF), or Risk = LOF x COF. Likelihood of failure is closely related to the specific characteristics and anticipated threats of each pipeline segment. Consequence of failure is related to the energy in each pipeline and the population density potentially affected by a failure. In this manner, the pipeline segments are sub-ranked for scheduling purposes primarily based on the consequence of failure of each segment. Potential impact radius refers to the radius of a circle within which the potential failure of a pipeline could have significant impact on people or property and is dependent upon the pipeline's diameter and MAOP. A larger potential impact radius typically affects proportionally larger numbers of people, and in this manner, calculation of the segment specific potential impact radius provides an effective means to rank segments by their potential energy and possible affect [sic] on population density. Long seam factors will be applied to raise the score for certain pipeline segments, as specified in 49 CFR 492.113.*

The table below provides a risk ranking comparison of Line 1600 to other SDG&E gas transmission pipelines utilizing the method described above. Using this methodology, a segment-specific risk ranking would yield the same results since the ranking is primarily based on diameter, Maximum Allowable Operating Pressure (MAOP), and long seam factor, which are substantially common throughout the pipeline.

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Priority	Line Number	Adjusted PIR
1	49-28	368
2	49-17	368
3	49-19	368
4	49-25	368
5	49-32	368
6	49-16	368
7	49-11	345
8	49-18	345
9	1600	312
10	49-26	293
11	49-20	293
12	49-27	293
13	49-18	276
14	49-14	276
15	49-15	247
16	49-22	247
17	49-32	221
18	49-13	220

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QUESTION 10:

Please provide the emergency plans developed to supply gas to customers in the event that Line 3010 has an issue and that Line 1600 has not been replaced.

RESPONSE 10:

SDG&E and SoCalGas' plan is to maintain Line 1600 as a transmission line until it is replaced. If Line 3010 has an issue that takes it out of service, curtailment of noncore load would be ordered in compliance with SDG&E Gas Rule 14 to reduce demand. The System Operator would also work with the California Energy Hub and Gas Acquisition to transport supply from the El Paso Southern System to Otay Mesa, depending on availability, to meet core and critical noncore requirements in excess of Line 1600 capacity.

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QUESTION 11:

What would be the minimum resiliency that SDG&E believes is needed in the situation that Line 3010 becomes impaired?

RESPONSE 11:

A 30-inch diameter pipeline will provide resiliency and redundancy against a Line 3010 outage. SoCalGas and SDG&E believe, however, that a 36-inch diameter pipeline provides the additional benefit of operational flexibility for relatively low incremental cost.

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QUESTION 12:

Please provide a copy of the current emergency plan and load shedding plan for a situation that Line 3010 is no longer available and the one developed if Line 1600 is no longer available.

RESPONSE 12:

Please refer to the response to Question 10, and to SDG&E Gas Rule 14 at http://regarchive.sdge.com/tm2/pdf/GAS_GAS-RULES_GRULE14.pdf.

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QUESTION 13:

What type of event(s) would cause a scenario as asked in questions 10, 11 and 12?

RESPONSE 13:

There are a number of events that could result in an emergency scenario for Line 3010 either independently or acting in combination - including but not limited to: 1) time-dependent threats such as corrosion; 2) destabilization of otherwise stable threats such as outside force interacting with seam anomalies or equipment failures,; 3) time-independent threats such as vandalism, terrorism, accidental overpressure, third-party damage, earth movement, wildfire, or other natural disasters; 4) required pressure reductions resulting from public encroachment.

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Date Requested: November 9, 2015
Date Responded: November 25, 2015
Amended Response Submitted: June 1, 2017

The response to Question 14 has been amended, this amendment replaces the response to Question 14 in its entirety.

QUESTION 14:

Has there ever been an event that caused a partial or full shutdown of Line 3010? If yes, please provide for each such event:

a. Date and duration of shutdown event

b. Number of customers and amount of load that lost full gas service

c. Number of customers and amount of load that had to curtail gas usage

RESPONSE 14:

There were 8 planned shutdowns of Line 3010 for planned maintenance from October 2011 through November 2012. For the 8 shutdowns (Items #2-9 listed below), all SDG&E noncore service was curtailed – the curtailment event for each of these outages is listed below; noncore customers were allowed to maintain service by declaring an operating emergency and delivering supply to the Otay Mesa system receipt point.

1. October 11, 1985[1]
2. October 1, 2011
3. October 8, 2011
4. October 15, 2011
5. October 22, 2011
6. October 29-30, 2011
7. November 5, 2011
8. November 12, 2011
9. November 19, 2011

[1] With respect to Line 3010, Applicants are aware of one unplanned outage on October 11, 1985 for 1 day resulting from damage caused by a third party contractor. Applicants located documentation for this outage that occurred in 1985. Applicants also found the memo attached hereto, but the documentation is not clear whether the other two events on Line 3010 resulted in an outage. Applicants cannot confirm with certainty whether other unplanned outages on Line 3010 occurred prior to 2010.

The primary goal of a curtailment is to limit throughput to protect service to higher priority customers. Curtailment orders allocate capacity available for lower priority service. SoCalGas and SDG&E are unable to measure load that does not occur as the result of a curtailment order.

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QUESTION 15:

What is the likelihood that there would be an event that would cause a total shut down of Line 3010?

RESPONSE 15:

No such forecast is available. See the response to Question 13 for example events.