



---

# SoCalGas and SDG&E Pipeline Safety Records Review and Actions in Response to NTSB Safety Recommendations

May 4, 2011





## NTSB Recommendations

---

### NTSB Safety Recommendations to PG&E

- Search for all pre- and post-construction pipeline records for class 3 & 4 and class 1 & 2 HCA (criteria pipelines) natural gas transmission lines that have not had prior hydrostatic testing to establish MAOP. These records should be traceable, verifiable, and complete. (P-10-2, Urgent)
- Use traceable, verifiable, and complete records located in P-10-2 to determine MAOP based on the weakest section or component of criteria pipelines that have not had MAOP established through prior hydrostatic testing. (P-10-3, Urgent)
- If unable to establish MAOP through P-10-2 or P-10-3, establish MAOP through a spike test followed by a hydrostatic pressure test. (P-10-4)

### CPUC Executive Director Clanon January 3, 2011, Directive

- “pay particular attention to NTSB recommendations to PG&E titled P-10-2, P-10-3, and P-10-4.” Report “detailing the steps you will take proactively to implement corrective actions as appropriate for your natural gas transmission pipeline systems located in California.” Due April 15th.



## SoCalGas/SDG&E Approach

---

- Category 1: criteria pipelines/segments that have documentation of hydrostatic pressure testing. Documentation supports at least a 1.25 MAOP safety margin. (P-10-2, Urgent)
- Category 2: criteria pipelines/segments that have documentation of pressure testing using a medium other than water, as provided in PHMSA regulation 49 CFR 192 Subpart J. Documentation supports at least a 1.25 MAOP safety margin. (P-10-2, Urgent)
- Category 3: criteria pipelines/segments whose documented highest operating pressure - an in-service strength test using natural gas - is at least 1.25 times the current MAOP. Identical measure to 20% MAOP reduction ordered by the CPUC on PG&E pipelines in September and December, 2010, to establish a 1.25 MAOP safety margin. (P-10-2, Urgent)
- Category 4: criteria pipeline segments not in Categories 1, 2, or 3 and prioritized for further analysis and remedial action. (P-10-4)
- SoCalGas and SDG&E did not validate MAOP using “weakest component” P-10-3 methodology. To do so, records must demonstrate, without fail, that no pipeline components were changed subsequent to the date of identified records, requiring a perfect chain of document custody for pipelines that may have been installed over fifty years ago and that have been subject to many different document retention regulatory requirements.



# SoCalGas/SDG&E April 15 Filing

As of April 26, 2011

	Demonstrated Safety Margin			Safety Margin to Be Verified	TOTAL
	Category 1	Category 2	Category 3	Category 4	
	Hydro-Statically Tested	Strength Tested with Nitrogen or Other Medium	In-Service Strength Tested with MAOP Reduction	Activities in Progress to Validate Safety Margin	
	NTSB P-10-2			NTSB P-10-4	
SoCalGas	734/757*	272	27	383/360*	1416
SDG&E	134	8	0.0	64**	206

- SoCalGas: 207 miles of Category 4 pipelines have been in-line inspected (ILI)
- \* April 26 update to Executive Director Clanon: SoCalGas located additional Category 4 hydrostatic pressure test records after April 15, reducing by 24 miles post-1970 Category 4 criteria pipelines.
- Updated Category 4: SoCalGas 18 miles and SDG&E 3 miles installed after June 1970
- \*\*SDG&E has reduced pressures on 63.2 miles of Category 4 miles.



# Pipeline Age

Miles by Decade of Installation	Pre 1940	1940 - 1949	1950 - 1959	1960 - 1969	1970 - 1979	1980 - 1989	1990 - 1999	2000 - 2009	Total
<b>SoCalGas</b>	<b>302</b>	<b>498</b>	<b>1260</b>	<b>839</b>	<b>385</b>	<b>300</b>	<b>322</b>	<b>83</b>	<b>3,989</b>
<b>SDG&amp;E</b>	<b>4</b>	<b>54</b>	<b>48</b>	<b>67</b>	<b>21</b>	<b>7</b>	<b>43</b>	<b>2</b>	<b>246</b>
<b>Total</b>	<b>306</b>	<b>552</b>	<b>1308</b>	<b>906</b>	<b>406</b>	<b>307</b>	<b>365</b>	<b>85</b>	<b>4,235</b>
Percentage	7.2%	13.0%	30.9%	21.4%	9.6%	7.2%	8.6%	2.0%	

- Approximately 90% of Sempra Energy Utilities Category 4 pipelines were constructed pre-1962.
- CPUC General Order 112 requires pipelines constructed after 1962 to be strength tested.



## Preliminary Category 4 Action Plan (P-10-4)

	Actions	Date
Universal	Bi-Monthly Pipeline Patrols and Leakage Surveys	In Progress
Segment-Specific	Execute Action (e.g. pressure reduction, strength test, etc.)	In Progress
	Complete Records Search & Analysis and Develop Segment-Specific Action Plan	Preliminary Plan -- 7/29/11 Final Plan -- 10/14/11
Non-Destructive In-Line Inspection Validation	Identify Pipelines to Assess Using Advanced ILI Tools	5/2/11
	Schedule and Prepare Pipelines for ILI	7/15/11
	Complete ILI	7/29/11
	Complete ILI Data Analysis	10/21/11
	Complete Pipeline Excavation & Validation (pending permit approvals)	12/31/11
Reporting	Progress Report	6/24/11
	Brief CPUC	8/1/11
	Final Action Plan	10/21/11
	2011 Year-End Status Report	1/31/12