

Proceeding: R.11-02-019
Exhibit No.: _____
Date: 9-6-2013

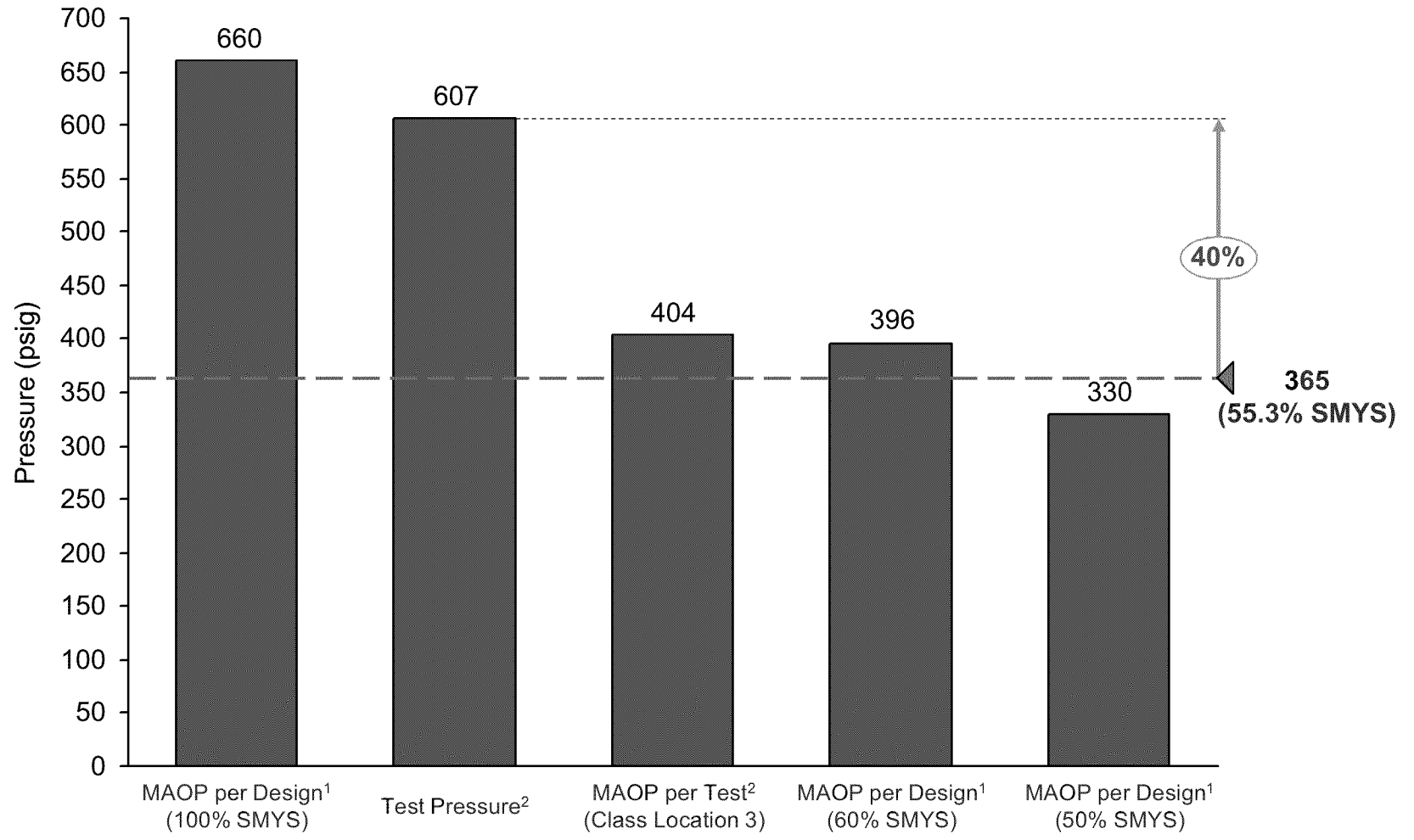
PACIFIC GAS AND ELECTRIC COMPANY

PG&E Direct Exhibits





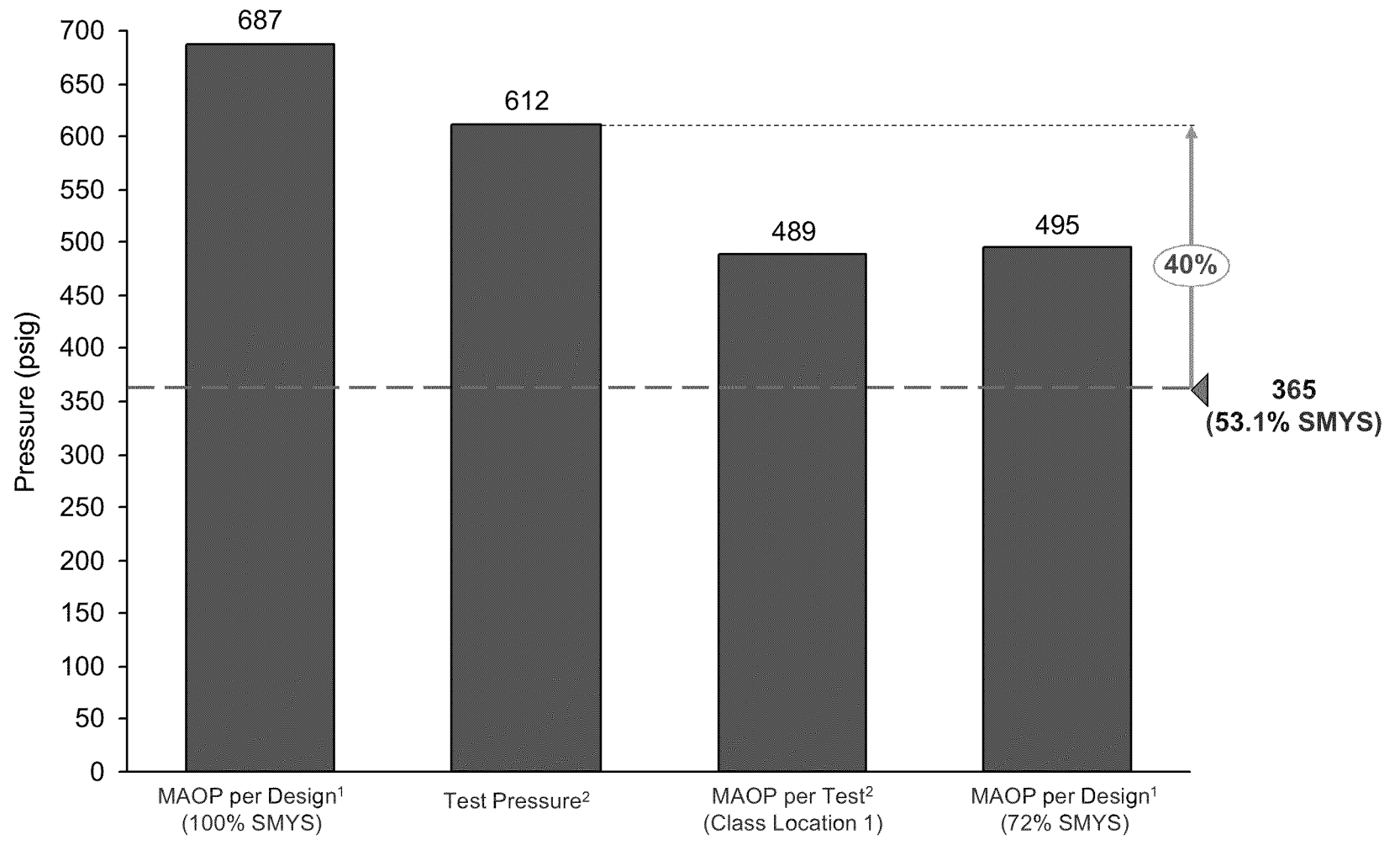
Line 147 (Segment 109) MAOP Analysis



- 1. Based on Material Specification Records
- 2. Based on Strength Test Pressure Record



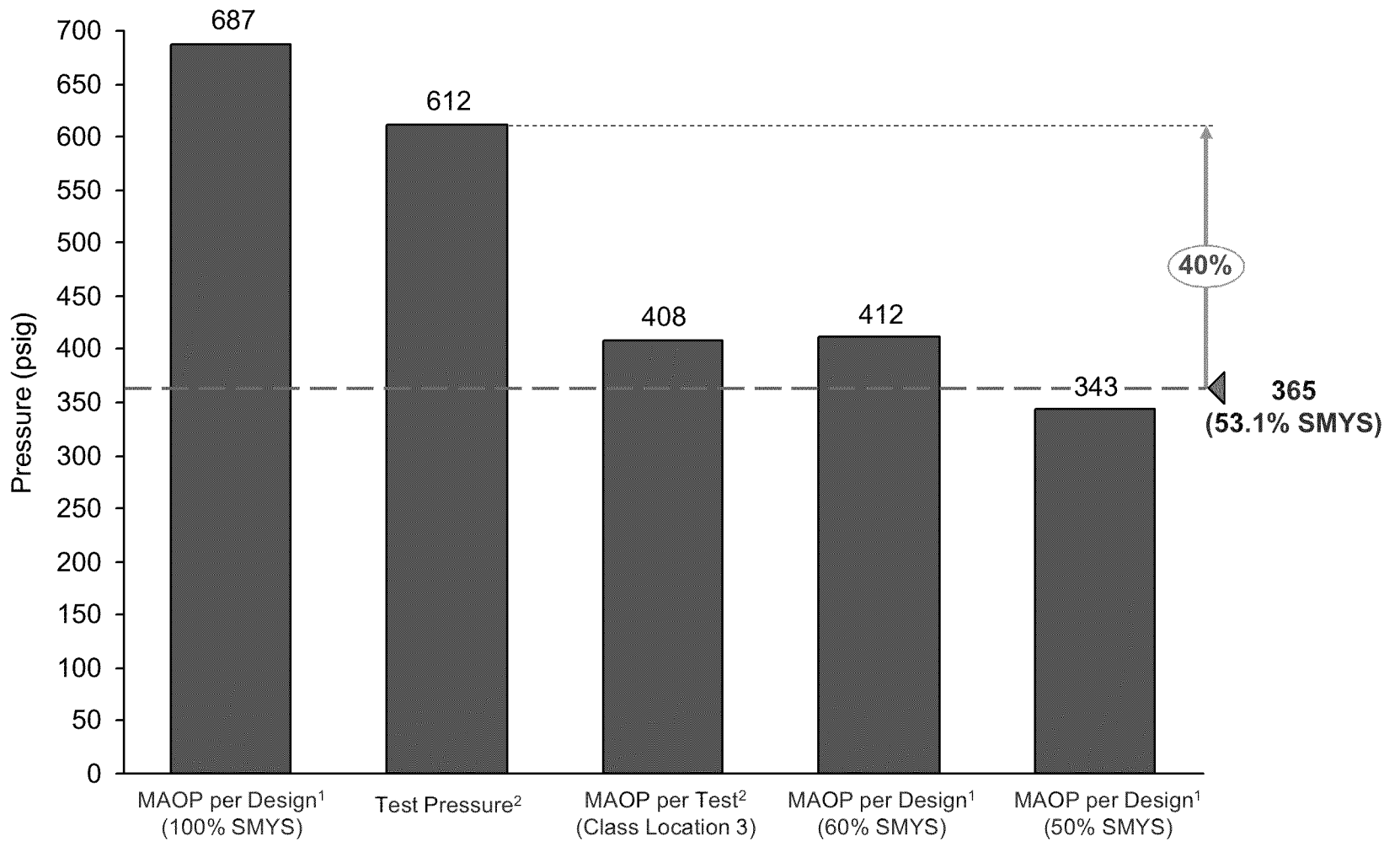
Line 147 (Segment 103) MAOP Analysis



- 1. Based on Material Specification Records
- 2. Based on Strength Test Pressure Record



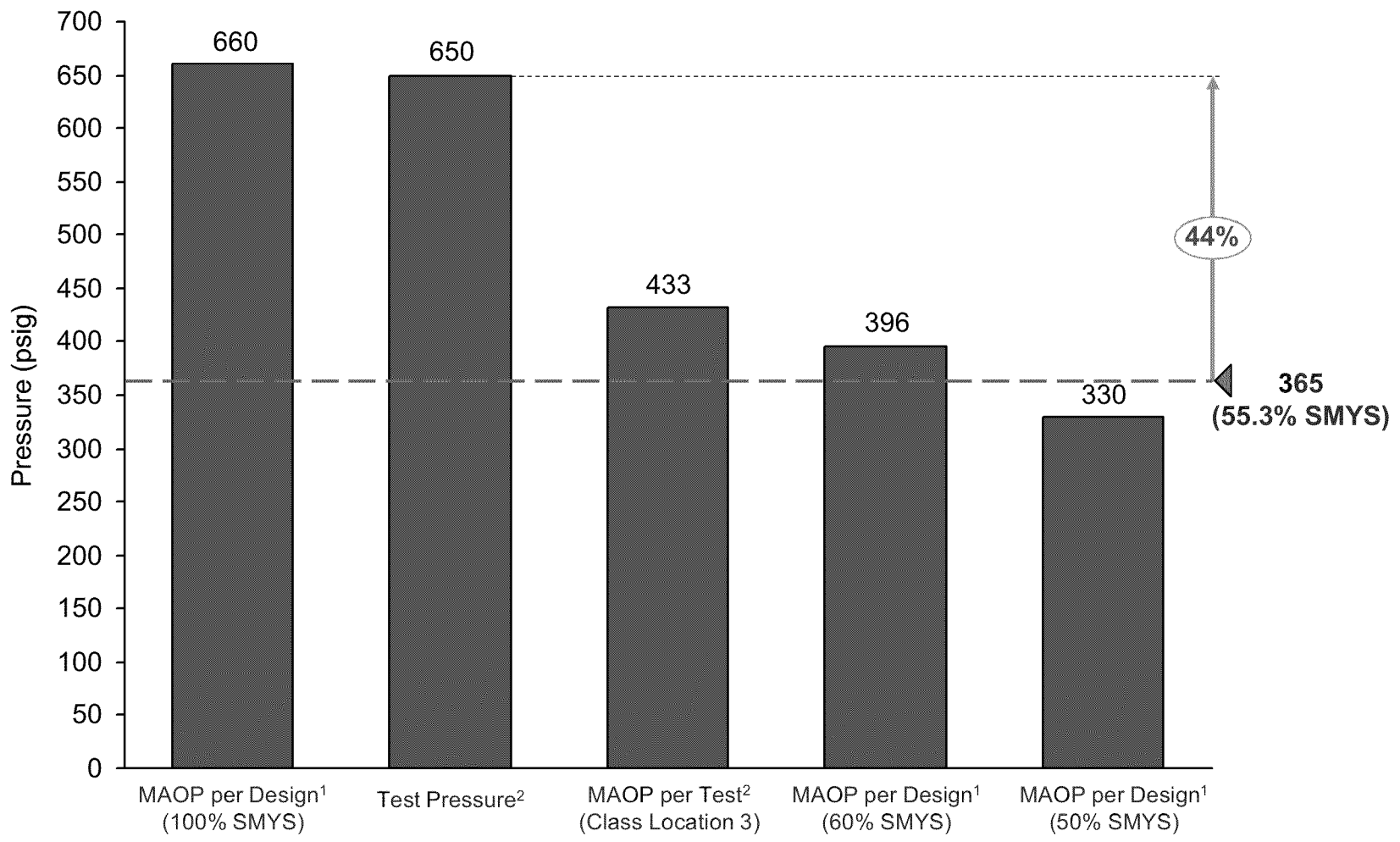
Line 147 (Segments 103.1 & 103.6) MAOP Analysis



1. Based on Material Specification Records
2. Based on Strength Test Pressure Record



Line 101 (Segment 167.2) MAOP Analysis



1. Based on Material Specification Records
2. Based on Strength Test Pressure Record



Pressure Reduction Implications

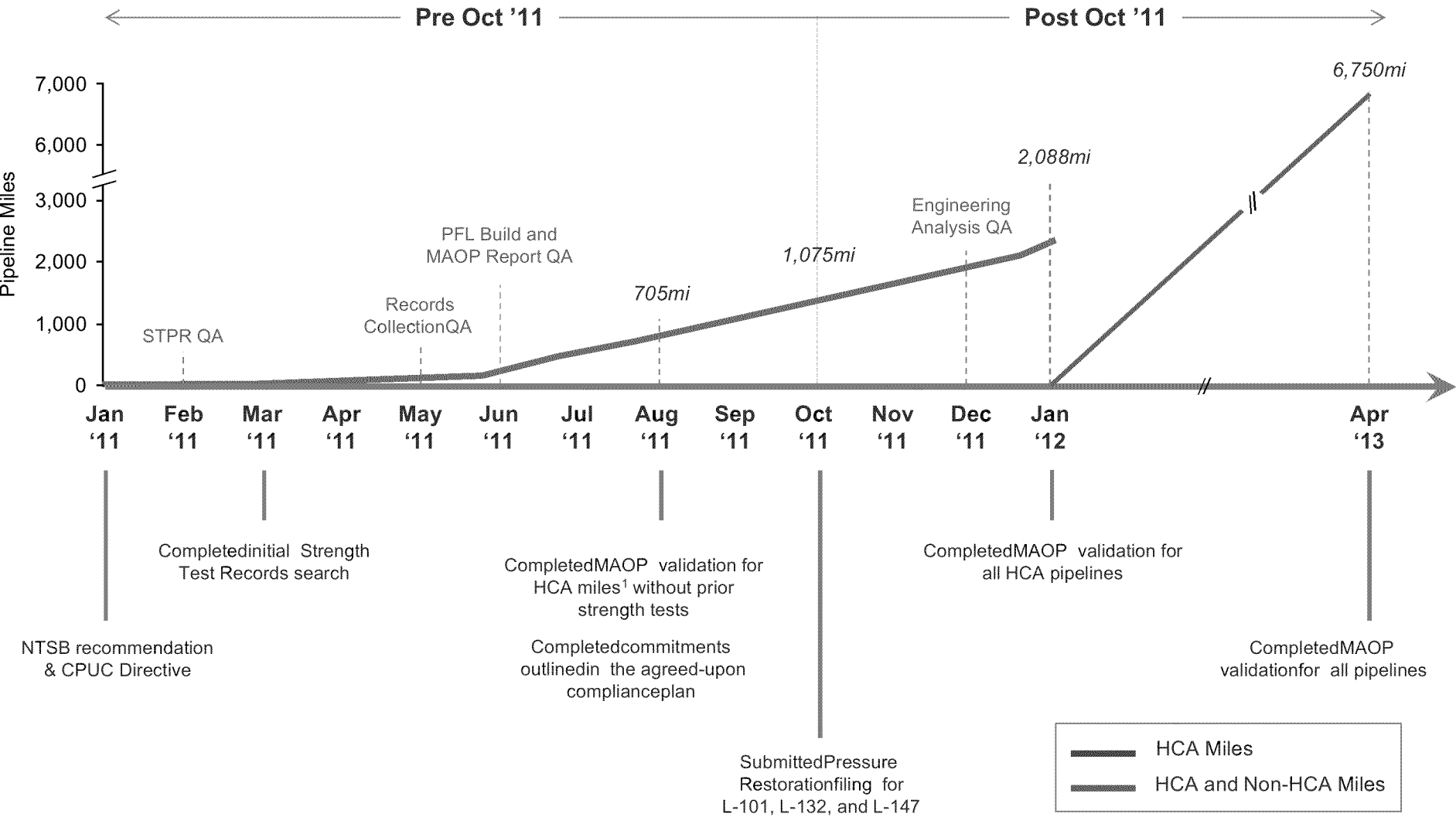
All pressure restoration orders suspended

System	Typical Winter Day (5 to 50 days/winter)	Cold Winter Day (1-in-2 year)	Extreme Cold Day to APD (1-in-10 to 1-in-90 year)
Peninsula	OK	OK	<ul style="list-style-type: none"> • High risk of core curtailment of 930 customers (SF Financial District) • 100% curtailment of 122 Peninsula noncore customers • ~ 240 MW reduction at certain critical power plants
San Jose/Morgan Hill/Gilroy	OK	OK	<ul style="list-style-type: none"> • 50% curtailment of 60 South Bay noncore customers • ~ 430 MW reduction at certain critical power plants
East Bay	OK	OK	<ul style="list-style-type: none"> • 50% curtailment of 85 East Bay noncore customers • ~ 260 MW reduction at certain critical power plants
Central Coast	OK	OK	<ul style="list-style-type: none"> • 50% curtailment of 84 Central Coast noncore customers • ~330 MW reduction at certain critical power plants

Note: Above is one curtailment option to illustrate magnitude of impact. Further review and input from the ISO and others are required to develop a curtailment plan.



Pipeline MAOP Validation Timeline



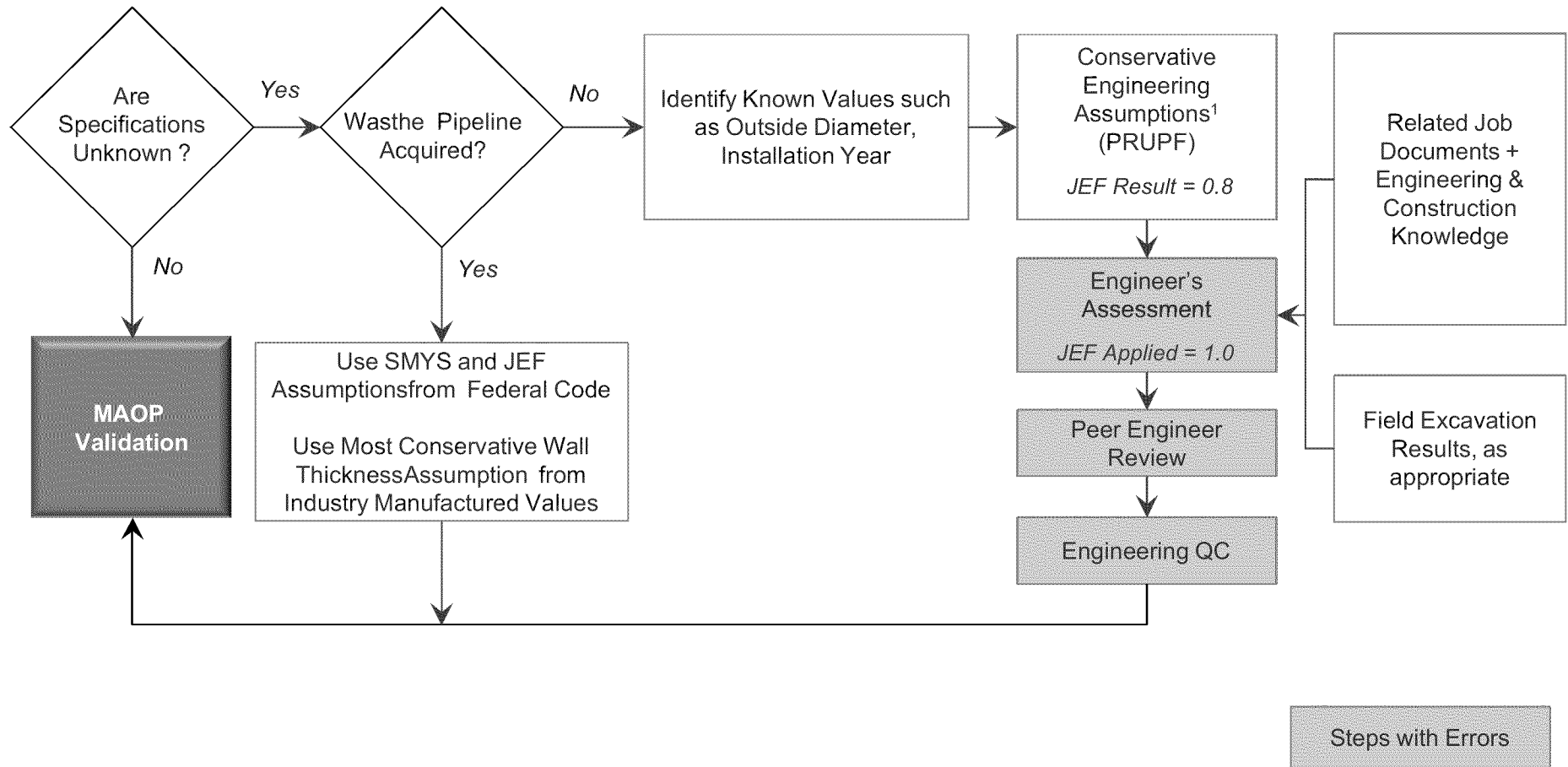
1. HCA miles includes pipelines in Class Location 3 & 4, and HCA Class 1 & 2



MAOP Validation Process

Line 147 (Segment 109) – Engineering Analysis

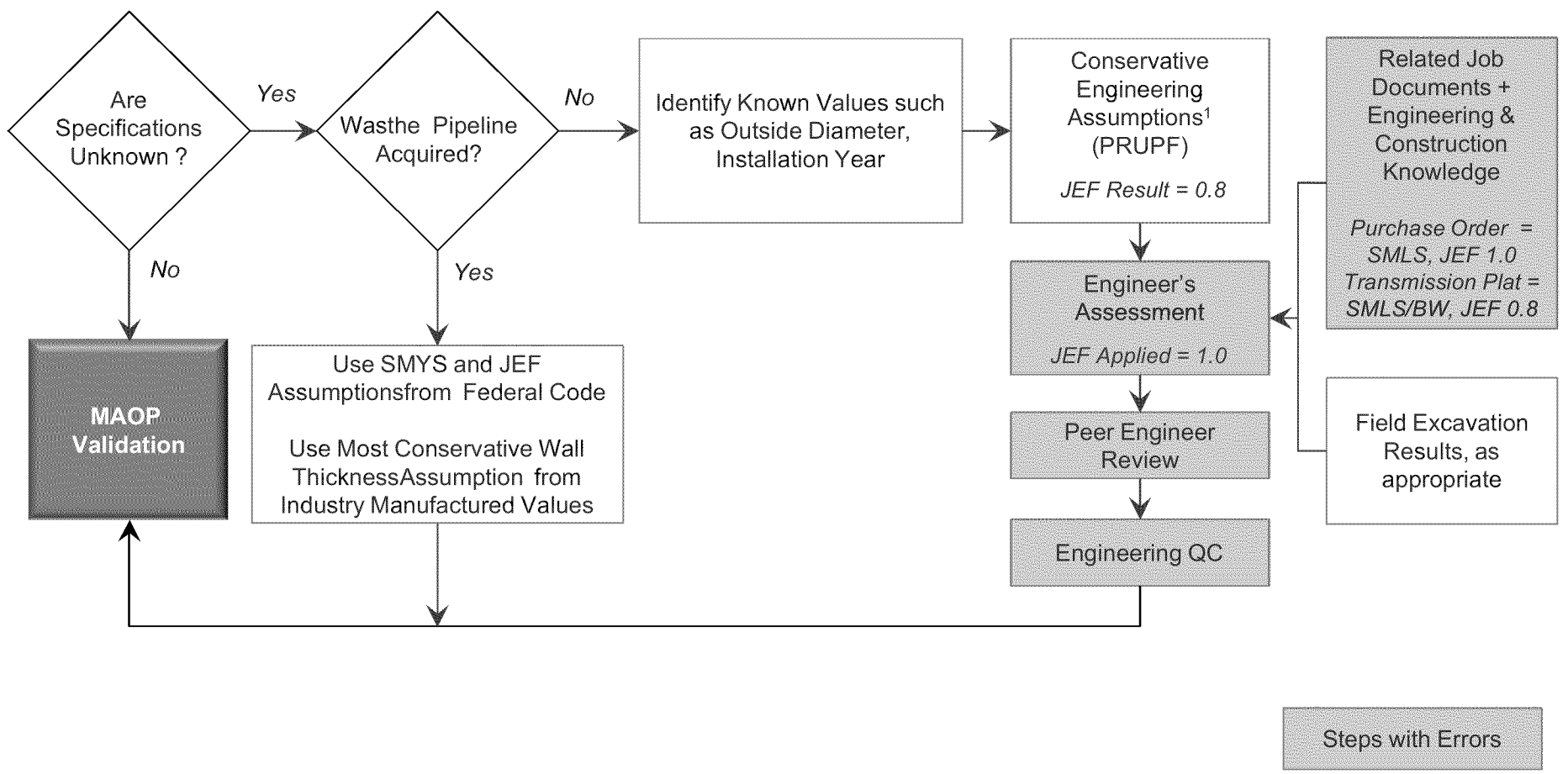
Oct 2011 Process



1. In accordance with PG&E's historic material specifications



Oct 2011 Process

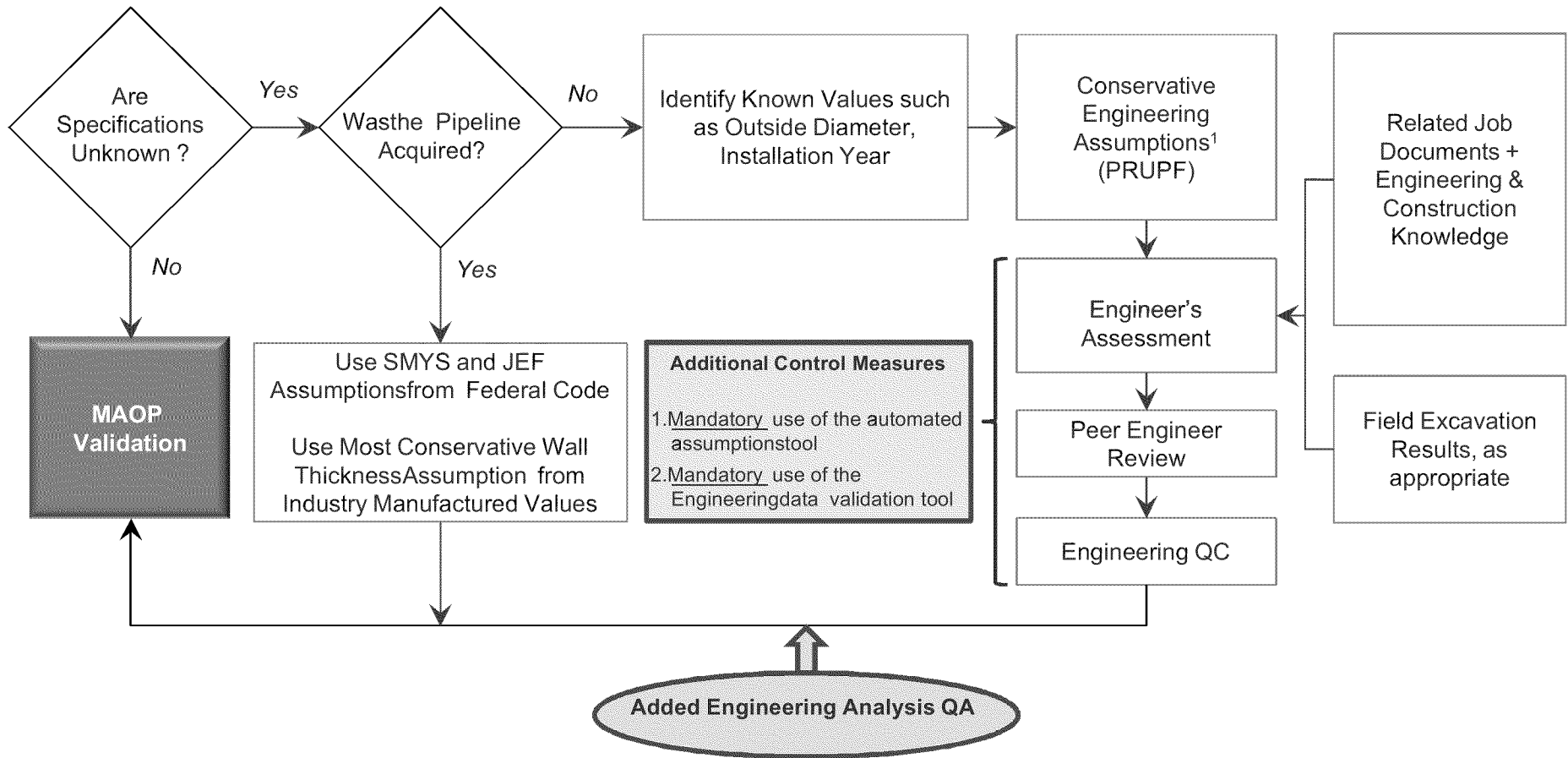


1. In accordance with PG&E's historic material specifications



MAOP Validation Process Enhanced Process – Engineering Analysis

Enhanced Process – December 2011



1. In accordance with PG&E's historic material specifications



Appendix



Maximum Allowable Operating Stress Level (% SMYS)			
Class Location	Pre-1971 Class Change		Post-1971 Class Change
	Strength Test Per 192.611 (1971-1974)	Strength Test Per 192.611 (post-1974)	Strength Test Per 192.611
2	72%	60%	72%
3	60%	50%	60%
4	50%	40%	50%