PACIFIC GAS AND ELECTRIC COMPANY
San Bruno GT Line Rupture Investigation
Data Response

PG&E Data Request No.:	CPUC_184-03Supp02		
PG&E File Name:	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-Q03Supp02		
Request Date:	September 14, 2011/ February 13, 2012	Requester DR No.:	
Date Sent:	April 2, 2012	Requesting Party:	CPUC (CPSD)
		Requester:	[redacted]

Please note that this response contains sensitive personal information pertaining to PG&E employees, such as employee names, Lan IDs, and critical infrastructure information not normally provided to the general public. Federal policy by the Department of Homeland Security and by other federal, state and local agencies limits gas pipeline valve and regulator and station information from public disclosure for national security reasons pursuant to the Critical Infrastructures Information Act of 2002, 6 U.S.C. §§131-134 ("CIIA"). The CIIA defines Critical Infrastructures Information ("CII") as "information not customarily in the public domain and related to the security of critical infrastructure or protected systems. . . ." 6 U.S.C. § 133(3). Thus, for employee privacy and corporate security or CII reasons, and only these reasons, this response is submitted under Section 583. The dissemination of employee information and corporate security information contained in this response raises privacy concerns and corporate and public safety risks. Therefore, PG&E believes that such information should remain confidential and not be subject to public disclosure.

Please note that the response to supplement 02 begins on page 5 of this document. The previous responses are included on pages 1-4 for your reference.

Question 3

What studies, if any, were conducted under 49 CFR 192.609 to compare the design, construction, and testing procedures used in the original construction of segments of PG&E's pipeline with the new class designations (e.g., caused by increased population density or the establishment of an HCA) identified in the June 30, 2011 CPUC Class Location Study?

-Please include the operating and maintenance history of these segments, the maximum actual operating pressure and the corresponding hoop stress, taking pressure gradient into account, for the pipeline segments, and the actual area affected by the population density increase including physical barriers or other factors which may limit further expansion of the more densely populated area, considered in class studies conducted by PG&E prior to September 9, 2010, on those class locations identified as changed in the June 30, 2011 CPUC Class Location Study.

-Please provide copies of all class location studies conducted prior to September 9, 2010, on those changed class locations (172.1 miles of transmission pipeline segments) identified in the June 30, 2011 CPUC Class Location Study.

ANSWER 3 (PROVIDED TO CPSD ON OCTOBER 7, 2011)

On June 30, 2011, PG&E submitted a report on the Company's on-going system-wide class location verification effort to the CPUC. PG&E provided data from a report by Willbros Engineers (U.S.), LLC ("Willbros") in which Willbros identified that 172.1 miles of pipeline had changed up in class location. As a result of PG&E's continued work to review and verify class location designations across its gas transmission system, and its attendant quality control and quality assurance efforts, as of September 12, 2011, the number of miles with a possible change up in class location has decreased to 169.6. In addition, Willbros and PG&E are analyzing the cause of the class changes, and which ones are due to an increase in population density.

PG&E is undertaking an extensive effort to confirm and revise, as necessary, the MAOP on each of the segments identified by Willbros that potentially changed up in class location designation. As part of this process, PG&E's pipeline engineers have been reviewing and considering design, construction, and testing information when available. PG&E has prioritized the segments and has focused first on the ones that possibly were operating at a pressure above their class designation as shown by the preliminary Willbros review. Depending upon the particular characteristics of each affected pipeline segment, the Company may replace the pipeline or reduce the operating pressure as appropriate. PG&E's pipeline engineers will complete studies pursuant to 49 CFR 192.609 on pipeline segments that have gone up in class as soon as possible once pressure issues have been resolved.

In addition, PG&E is in the process of reviewing its records in order to identify class location studies that were performed for these pipeline segments prior to September 9, 2010. PG&E will update the Commission when it has retrieved relevant information.

ANSWER 3 SUPPLEMENT 1 (PROVIDED TO CPSD ON FEBRUARY 2, 2012)

As described in PG&E's Response to I.11-11-009 (Response) PG&E determined that 293 of the 1,376 segments that are currently in a higher class location than reflected in GIS had an MAOP greater than 40% SMYS.[1] Where PG&E had not

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[1] Although the language of 49 CFR 192.609 is disjunctive, since a hoop stress of 40% of SMYS is allowed in class locations, by definition a segment must be operating at

identified a change in class location that occurred prior to the June 30, 2011, Class Location Study Report, it did not perform a class location study under Section 609 at the time of the class location change. Since filing its Response PG&E has updated it's analysis and determined that there were actually 282 segments requiring a Section 609 study.

Section 609 studies for these 282 segments are attached to this response, and are listed in the table below.[2] Each study consists of two documents taken together, a "609 study" and a corresponding PSVF form, which includes information gathered and analyzed during the Section 609 study.

Attachment	Description
SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-Q03Atch01	Summary table of 282 segments
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch02-CONF	131_Antioch_Livermore_11022011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch03-CONF	21F_[redacted]_10262011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch04-CONF	300A_Hinkley_PLS3_11162011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch05-CONF	300A_PLS4_PLS5_11162011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch06-CONF	300A_PLS6_PLS7_11152011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03aAtch07-CONF	300B_Hinkley_PLS3
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03_Atch08-CONF	300B_Kettleman_PLS6_11162011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch09-CONF	300B_PLS4_Kettleman_11072011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch10-CONF	300B_PLS6_Milpitas_10252011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch11-CONF	303_[redacted]_11152011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch12-CONF	303_[redacted]_11302011
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch13-CONF	400_[redacted]_11072011
SanBrunoGT-LineRuptureInvestigation	401_Bethany_Panoche_11072011

a hoop stress greater than 40% of SMYS to be potentially not commensurate with the allowable hoop stress for its class location.

[2] Some of the attached studies show additional segments that are operating under 40% SMYS because PG&E conservatively included them for a Section 609 study while it simultaneously validated their MAOPs. The studies initiated for these segments were not completed once they were determined to be under 40% SMYS. These segments are not included in the final count of 282 segments with a complete Section 609 study.

_DR_CPUC_184-Q03Atch14-CONF	
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch15-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch16-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch17-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch18-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch19-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch20-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch21-CONF	609 Review Remaining Segments_[redacted] and [redacted]Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03_Atch22-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch23-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch24-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch25-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch26-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch27-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch28-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch29-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch30-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch31-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch32-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch33-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch34-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch35-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch36-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch37-CONF	609 Review Remaining Segments[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch38-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch39-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch40-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation	609 Review Remaining Segments_[redacted]_Signed

_DR_CPUC_184-Q03Atch41-CONF	
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch42-CONF	609 Review Remaining Segments_[redacted]_Signed
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch43-CONF	PSVF_Sections 131A L to 401B P
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch44-CONF	PSVF_Sections[redacted]
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch45-CONF	PSVF_Sections [redacted]
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch46-CONF	PSVF_Sections [redacted]
SanBrunoGT-LineRuptureInvestigation _DR_CPUC_184-Q03Atch47-CONF	SAC_220_[redacted]_10262011

CPSD Follow-up data request dated 2/13/12 on Q.4(d) (related *to SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-Q03Supp01)*

(4d) At page 3, PG&E provides:

> "Where PG&E had not identified a change in class location that occurred prior to the June 30, 2011, Class Location Study Report, it did not perform a class location study under Section 609 at the time of the class location change."

> Does PG&E admit that PG&E did not perform a Class Study for the 293 segments identified in PG&E's Data Response as required by 49 C.F.R. Part 609 at the time the segments changed in class to their final classification as determined in the June 30, 2011, Class Location Study Report?

Answer to CPSD Follow-up data request dated 2/13/12 on Q.4(d) (related *to SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-Q03Supp01)* Answer provided to CPSD on April 2, 2012.

In PG&E's supplemental response to CPUC 184, Question 3, submitted after filing its Response to I.11-11-009, PG&E had updated its analysis and stated that there were 282 segments requiring a class location study pursuant to 49 C.F.R. 192.609 (Section 609 study). Since providing its supplemental response to CPUC 184, Question 3, and as part of its ongoing verification efforts since January 17, PG&E has now determined that that there were actually 277 such segments (29 additional segments required a Section 609 Study, while 34 segments that were previously reported as requiring a Section 609 Study did not so require, for a total of 277 segments).

Of these 277 segments, 41 segments changed in class because of a conservatism (Reasons 1, 3a, 3b, 7) [3] and 236 segments changed in class because of an error (Reasons 2, 3c, 4, 5, and 6).

PG&E performed a Section 609 study on these 277 segments after they were identified as changing up in class during the 2011 system-wide class location study. PG&E did not perform a Section 609 study at the time the segments changed in class to their final classification as determined by the 2011 system-wide class location study.

The 29 additional 609 studies are attached to this response (To be provided to CPSD via CD due to the size of the files). Also attached is a spreadsheet identifying the 277 segments requiring a Section 609 Study and indicating if that study was previously provided to CPSD in SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-Q03Supp01 *(SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-Q03Supp02Atch030*).

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[3] One of these segments changed in class within the past 24 months, as described on page 19 of PG&E's January 17, 2012 Response to I.11-11-009.

Document Listing for CPUC_184-003-S2 (Index No. 2081.04)

Doc. No.	File Name	Attachment Name
1	F0001_300B_171.6	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch001-CONF
2	F0002_300B_171.8	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch002-CONF
3	F0003_300B_172	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch003-CONF
4	Y0033_103_126	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch004-CONF
5	Y0043_108_127	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch005-CONF
6	Y0044_108_127.3	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch006-CONF
7	Y0104_123_114.3	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch007-CONF
8	Y0105_123_114.32	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch008-CONF
9	Y0106_123_114.35	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch009-CONF
10	Y0108_123_114.91	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch010-CONF
11	Y0112_123_115.7	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch011-CONF
12	Y0114_123_116	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch012-CONF
13	Y0117_123_120.6	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch013-CONF
14	Y0133_132_162.2	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch014-CONF
15	Y0320_021F_102	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch015-CONF
16	Y0348_0407-01_104	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch016-CONF
17	Y0452_118A_117	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch017-CONF
18	Y0453_118A_117.05	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch018-CONF
19	Y0454_118A_117.07	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch019-CONF
20	Y0658_174-2-7_103.9	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch020-CONF
21	Y0717_177A-3_101.3L	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch021-CONF
22	Y0718A_177A-3_101L	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch022-CONF
23	Y0824_200-244_155	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch023-CONF
24	Y0855B_210C-1_224	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch024-CONF
25	Y0856_210C-1_233	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch025-CONF
26	Y0911_301F_105.4	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch026-CONF
27	Y0912_301F_105.6	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch027-CONF
28	Y0913_301F_106	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch028-CONF
29	Y1237_STUB8189_551	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch029-CONF
30	609 Studies provided in CPUC_184-003Supp01	SanBrunoGT-LineRuptureInvestigation_DR_CPUC_184-003Supp02Atch030