APPENDIX C: TABLE OF FOOTNOTE REFERENCES

Footnote Number	Footnote Text	Page Number
1	On January 1, 2013, CPSD officially changed its name to the Safety and Enforcement Division (SED). However, in light of all the references to CPSD in the previous rulings by the Commission and the Administrative Law Judges (ALJ's), pleadings, exhibits, testimony and cross-examination of witnesses and corresponding transcript references, to avoid confusion we will continue to refer to SED as "CPSD" in this briefing and throughout the remainder of this proceeding.	1
2	CPSD Exhibit 6, Atch. 1, pp. 75-76.	7
3	I.11-02-016, Assigned Commissioner's Scoping Memo and Ruling, 11/21/2011, p. 2.	7
4	Decision (D.)12-12-030 (Dec. 20, 2012), p. 43, 2012 Cal. PUC LEXIS 600, at *86-87; see also D.00-06-038 (2000) 6 Cal.P.U.C.3d 534, 537-538.	8
5	California Public Utilities Code §963(b)(3) states in part: "It is the policy of the state that the commission and each gas corporation place safety of the public and gas corporation employees as the top priority."	9
6	Cal Pub. Util. Code §451 (1951); Cal. Pub. Util. Act, Art. II §13(b).	9
7	In that proceeding, the Commission investigated the reasonableness of Southern California Edison Company's (SCE) operation and maintenance of its Mojave plant following the explosion of a high-pressure steam pipeline which killed six people and seriously injured ten: "The relevant question is whether, based on the information available at the time, the fact that hot reheat temperatures exceeded design temperatures should have prompted SCE to take steps to assure that the reheat line was in safe condition. At the time, SCE could not have known what the cause of a weld failure would be. They could only have known about circumstances that should have prompted them to inspect the piping system or take other related actions." D.94-03-048 (1994) 53 Cal.P.U.C.2d at 468.	10
8	PG&E Exhibit 4: D. 61269 (1960) 58 Cal. P.U.C. 413, 420, Findings and Conclusions 8: "[T]he promulgation of precautionary safety rules does not remove or minimize the primary obligation of respondents [which included PG&E] to provide safe service and facilities in their operations."	10
9	Carey was a complaint proceeding against PG&E. The Commission fined PG&E under §§2107 and 2108 for violation of §451 because of an explosion and fire caused by natural gas. On rehearing, the Commission rejected PG&E's arguments that the language of §451 was too vague and general to support the imposition of a fine and §451 failed to identify what action or inaction was unreasonable.	11
10	Id. at 741-742.	11
11	*Carey v. Pacific Gas and Electric Co*., supra, 85 Cal. P.U.C.2d at 683; *PacBell Wireless v. P.U. C.* 140 Cal.App.4th at 743.	11
12	See *PacBell Wireless v. P.U.C.,* supra, 140 Cal.App.4th at 742 (utility on notice of what conduct is just and reasonable under §451 based in part on information from the marketplace).	12
13	Id.	13

14	The American Standards Association (ASA) Code is the same as the ASME Standards.	13
15	PG&E Exhibit 47, p. 48, §841.41; and p. 49, Table 841.412(d).	13
16	PG&E Exhibit 47, p. 50, §841.42; and Table 841.421.	13
17	PG&E Exhibit 47, p. 50, §841.417.	13
18	PG&E Exhibit 47, pp. 59- 60, §841.5.	13
19	CPSD Exhibit 10; and PG&E response to CPSD DR 33, Q 10. Every PG&E response to a CPSD DR, which has been referred to in this brief, has been admitted into the record.	14
20	The Commission's General Orders 112 through 112-E were exhibits in this proceeding. See PG&E Exhibit 4 (D.61269, with GO 112 Attached); CPSD Exhibit 36a (D.66399, GO 112-A); CPSD Exhibit 60 (D.73223, GO 112-B); PG&E Exhibit 5 (D.78513, with GO 112-C Attached); PG&E Exhibit 7 (D.95-08-053, with GO 112-E Attached).	14
21	PG&E Exhibit 47, §§841.31; 841.41; and 841.411.	15
22	PG&E Response to CPSD DR 71, Q 1.C.	15
23	D.12-02-032, 2012 Cal. PUC LEXIS 74, at *4-5 (Feb.16, 2012).	17
24	TURN Exhibit 4, PG&E Response to Joint CPSD-TURN DR 01, Q 01, and Atch. GasTransmissionSystemRecordsOII_DR_Joint_001-Q01Atch.01.	17
25	*Grubb Co. v. Department of Real Estate* (2011) 194 Cal.App.4th 1494, 1502.	21
26	I.12-01-007, p. 10; see also Pub. Util. Code §761 (after hearing, the Commission may order utility to change unsafe and inadequate practices or facilities).	21
27	PG&E Exhibit 61 pp. 1-12 through 1-15.	22
28	See also *Huntington Memorial Hospital v. Superior Court* (2001) 131 Cal.App.4th 893, 911. Surely PG&E does not claim that it has been wrongfully and intentionally singled out for prosecution on an "invidiously discriminatory basis." *PacBell Wireless v. P.U.C.*, supra, 140 Cal.App.4th 718, 739.	22
29	PG&E Exhibit 4: D.61269, "Investigation into the Need of a General Order (GO 112) Governing Design, Construction, Testing, Maintenance and Operation of Gas Transmission Pipeline Systems", December 28, 1960, p. 4.	23
30	CPSD Exhibit 2, p. 2, lines 4-6.	24
31	CPSD Exhibit 2: NTSB_460802, p. 6.	24
32	CPSD Exhibit 2, p. 2, lines 8-11.	24
33	CPSD Exhibits 2 and 3: NTSB_460278, p. 4 and p. 10.	24
34	CPSD Exhibits 2 and 3: NTSB Summary Report and NTSB 469689, NTSB Report, Office of Research and Engineering, Figure 9 e.p. 16 .	25
35	CPSD Exhibit 4, p. 3, lines 11-19.	25

36	CA Pub. Utilities Code §451.	25
37	CA Pub. Utilities Act, Article II, §13(b).	25
38	I.11-02-016, "Pacific Gas and Electric Company's Response", June 20, 2011, p. 3-67: reference to RMP-06 (P2-128). Citations with the designations P2, P3 etc. refer to records produced by PG&E in its continuing electronic production of records supporting its June 20 2011 Response. These records are available in the Commission's central files on DVD and are part of the record in this proceeding.	26
39	Id.	26
40	ASA B31.1.8 - 1955, Chapter 1, §811.27.	26
41	When PG&E's line 132 operated at 390 psi, a 30 inch line with pipe wall thickness of .375 inches would have a calculated hoop stress of 15,600 psi.[Hoop Stress = (Pressure in psi X radius in inches)/pipe wall thickness in inches].	27
42	ASA B31.1.8 - 1955, Chapter 1, §811.27.	27
43	49 CFR §192, Table 841.12.	27
44	I.11-02-016, "Pacific Gas and Electric Company's Response", June 20, 2011, p. 3-67.	27
45	Tr. Vol. 3 Joint, Harrison/PG&E.	27
46	Tr. Vol. 3 Joint Harrison/PG&E, p. 304, l. 26.	27
47	CPSD Exhibit 2: NTSB_460802, p. 6	27
48	CPSD Exhibit 4, p. 3, line 20 – p. 4, line 4.	27
49	PG&E Exhibit 61, pp. 4-1 and 4-2.	28
50	The Steel Pipe Design Formula is set out in B 31.8, Sec. 841.1: Design Pressure (in psi) =([2 X Specified Min. Yield Strength (in psi) X minimum wall thickness (in inches)] / Diameter of the pipe (in inches)) X Construction type design factor X Longitudinal joint factor X Temperature derating factor.	28
51	PG&E's records provide no pertinent information about the pipe source, or manufacturing specifications regardless of whether the pipe was reused or new.	28
52	CPSD Exhibit 4, p. 3, l. 20 – p. 4.	29
53	CPSD Exhibit 4, p. 4, l. 4-6 and fn. 18.	29
54	CPSD Exhibit 4, fn. 17.	29
55	Based on review of GM 98015 records in PG&E's ECTS database, detailed construction design and As-Built Drawings exist in the GM 98015 for other creek crossings on the project. So, it was the practice to create such drawings.	29
56	CPSD Exhibit 4, p. 3, l. 20, referencing document MAOP06001661.	29
57	CPSD Exhibit 4, p. 3, l. 11-19.	29
58	CPSD Exhibit 6, fn. 1, Atch. 1 p. 46 (NTSB August 30, 2011 Accident Report).	29

59	CPSD Exhibit 4, p. 3, l. 14.	29
60	CPSD Exhibit 4, p. 3, fn. 13	30
61	PG&E Exhibit 61, p. 1-15	30
62	CPSD Exhibit 10; PG&E Response to CPSD DR 15 Q 6	30
63	PG&E Exhibit 61, p. 4-6, l. 29-31	30
64	Joint CPSD Exhibit 10, p. 58 and CPSD Exhibit 2, fn. 167: Citing PG&E Response to CPSD DR 4 Q 12.	30
65	Tr. Vol. 3 Joint Harrison/PG&E, p. 344	31
66	Id.	31
67	Id.	31
68	CPSD Exhibit 4, p. 3, lines l. 20	31
69	CPSD Exhibit 4, p. 4, lines l. 14	31
70	PG&E Exhibit 55	31
71	Tr. Vol. 2 Joint p. 219 Harrison/PG&E	31
72	JOINT (CPSD) Exhibit 11	32
73	Tr. Vol. 2 Joint, p. 222-223 Harrison/PG&E	32
74	CPSD Exhibit 4, p. 5.	33
75	Based on review of GM 98015 records in PG&E's ECTS database, Original construction documents for the section of pipe that spanned the creek are missing from the 1948 Job file for Project GM 98015.	33
76	Since 1951, California Public Utility Code §451 has required that "Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities. . .as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public." Even before §451 was written, from 1911 to 1951, the California Public Utility Act, Article II, §13(b) required that "Every public utility shall furnish, provide and maintain such service, instrumentalities, equipment and facilities as shall promote the safety, health, comfort and convenience of its patrons, employees and the public. . ." Therefore, from 1911 until the present, this law and California Public Utilities Code §451 have consistently required PG&E to maintain instrumentalities, equipment, and facilities to promote the safety of their respective patrons, employees and the public.	33
77	CPSD Exhibit 4, p. 5.	34
78	CPSD Exhibit 2, fn. 116, citing P2-2 (also, FERC 36A (18 CFR §125); June 10, 1920, Ch. 285, pt. III, §302, as added Aug. 26, 1935, Ch. 687, title II, §213, 49 Stat. 855; ASA B31.1.8-1955)	34
79	CPSD Exhibit 2, p. 2, lines 8-11, fn. 5	34
80	CPSD Exhibit 2, p. 32, l. 7-8 and fn. 125	34

81	PG&E Exhibit 61, p. 3-66. PG&E states "GIS serves as a central reference, it does not serve as our system of record for pipeline documents, which are maintained in hardcopy format in job files." And Daubin, Transcript Vol. 16, p. 47 "PG&E job files would be referred to as the system of record."	34
82	PG&E Exhibit 61, pp. 3-53 and 3-54, and statement of PG&E counsel I.11-02-016 Pre-Hearing Conference, November 1, 2011, Tr. p167. pp. 167 and 168. Counsel for PG&E does not appear to agree fully with his witness that GIS is used for integrity management, and has goes so far as to say that 'pipeline engineers can identify where there is reused pipe by looking at those job files", and that "[i]t doesn't matter what GIS says. The job file contains that information [the location of reused pipe]." PG&E's gathering of reused pipe information from PG&E's job will continue until sometime in 2013, almost three years after the San Bruno pipe failure. No evidence explains how PG&E should use PG&E's job files to prioritize pipeline replacement based on reused pipe that could be located virtually anywhere in PG&E's system.	34 and 35
83	Joint Exhibit, Joint-010, File for GM 136471. File folder is stamped "Closed", "Return to Plant Accounting Dept." and "Return to Records Center Bayshore and Geneva Brisbane #465741."	35
84	CPSD Exhibit 4, p. 5, lines 17-23	35
85	Id.	35
86	CPSD Exhibit 2, p. 2, fn. 3	35
87	CPSD Joint Exhibit 10	35
88	CPSD Exhibit 6, fn. 1, Atch. 1 p. 46 (NTSB August 30, 2011 Accident Report).	35
89	CPSD Exhibit 4, p. 6, fn. 31.	35
90	CPSD Exhibit 4, p. 6, lines 2-4	35
91	49 CFR §192.620	36
92	PG&E Exhibit 61, p. 4-4, underlining emphasis added and TR. Vol. 12 p. 1851-1852, l. 22	36
93	CPSD Exhibit 4, p. 5, lines 4-16.	36
94	PG&E Exhibit 61, p. 4-5	37
95	PG&E Exhibit 61, p. 4-3	37
96	PG&E Exhibit 54. Note on MAOP05395311 (reuse of 90 ft. of pipe) states that the pipe was originally installed in 1949.	37
97	This is true irrespective of whether 1949 span pipe was reused on the 1956 Segment 180 project. The file contains enough of this possibility to ensure that the information should have p[rovoked a search for other data , or have caused an inspection or test (with the records retained).	38
98	49 CFR §192.505.	38
99	ASA B31.1.8, §841.417 (1955) and 49 CFR §192. 517 (after 1970)	38
100	CPSD Exhibit 2, fn. 116: citing P2-2.	39

101	CPSD Exhibit 4, p. 30, lines 4-16.	39
102	I.11-02-016, "Pacific Gas and Electric Company's Response", June 20, 2011, p. 6D-4.	40
103	ASA B31.1.8 §841.42 sets out parameters for a strength test and §841.43 sets out parameters for leak tests.	40
104	CPSD Exhibit 10; PG&E Response to CPSD DR 15 Q 6.	40
105	CPSD Exhibit 4, p. 30, lines 22-25 and P3-30006, p. 26.	40
106	I.11-02-016, "Pacific Gas and Electric Company's Response", June 20, 2011, p. 6D-4, lines 8-10.	40
107	PG&E Exhibit 61, p. 4-6, lines 9-10.	40
108	CPSD Exhibit 6, fn. 1, Atch. 1 pp. 5-12 (NTSB August 30, 2011 Accident Report)	41
109	CPSD Exhibit 4 p. 6 l. 15-19 and fn. 34.	41
110	CPSD Exhibit 10; PG&E Response to CPSD DR 15 Q6 Atch. 3 PG&E Ap. 29548, 1955, Tr. Vol. 1, p. 124, Smith/PG&E.	41
111	CPSD Exhibit 10; PG&E Response to CPSD DR 15 Q6 Atch. 4, Statement of PG&E, Case 6352, re GO-112 PG&E Ap. 29548, 1955, Tr. Vol. 1, p. 124, Smith/PG&E	41
112	CPSD Exhibit 10; PG&E Response to CPSD DR 15 Q6 Atch. 3, PG&E Ap. 29548, 1955, Tr. Vol. 1, p. 124, Smith/PG&E.	41
113	PG&E Exhibit 61, p. 4-6, fn. 13.	41
114	PG&E Exhibit 61, p. 4-6, fn. 13.	42
115	CPSD Exhibit 6, fn. 1, Atch. 1 p. 95 (NTSB August 30, 2011 Accident Report).	42
116	CPSD Exhibit 4, pp. 6, lines 20-21 and 7, lines 1-3	42
117	PG&E Exhibit 47, ASA B31.1.8 - 1955, Sec. 841.42 sets out the tests required to prove strength for pipelines and mains. Example Standard Forms #75-27.	42
118	CPSD Exhibit 2, fn. 12: citing P2-963.	43
119	49 CFR §192.555.	44
120	CPSD Exhibit 4, p. 7	45
121	PG&E Response to CPSD DR 18 Q 17 Atch. 6.	45
122	CPSD Exhibit 2, p. 3, lines 3-9	45
123	CPSD Exhibit 2, p. 3, lines 18-20	45
124	49 CFR §192.553	45
125	49 CFR §192.555	46
126	PG&E Exhibit 61, pp. 4-8 through 4-12.	46

127	CPSD Exhibit 4, fn. 44, citing PG&E Response to CPSD DR 7, Q 12, Atch. 60 through Atch. 65: Survey Sheets showing various MAOPs for line 132.	46
128	Modifications with dates are shown in the title block at the lower right hand corner of each Survey Sheet.	46
129	CPSD Exhibit 4, pp. 7 and 8	46
130	CPSD Exhibit 4 p. 8, lines 9-10	47
131	CPSD Exhibit 4, p. 8, lines 17-19	47
132	Tr. 12, p. 1752 l. 5-10, Zurcher/PG&E	48
133	Decision 12-12-030, fn. 98, referring to 49 CFR §192.619(c).	49
134	CPSD Exhibit 4, fn. 51: citing PG&E Response to CPSD DR 3 Q13 Atch. 1.	50
135	CPSD Exhibit 4, fn. 52: PG&E Response to CPSD DR 3 Q 13.	50
136	CPSD Exhibit 2, fn. 29: citing P2-314. Also PG&E response to CPSD DR 47 Q 23 Atch. 1.	51
137	CPSD Exhibit 4, p. 9.	51
138	CPSD Exhibit 4, p. 9, lines18-26	51
139	PG&E Exhibit 61, p. 4-15, lines 4–6.	52
140	PG&E Exhibit 61, p. 4-13, lines 16-19.	52
141	PG&E Exhibit 61, p. 4-13, lines 20-22.	52
142	CPSD Exhibit 2, p. 7-8	54
143	PG&E Exhibit 61, p. 4-18	55
144	PG&E Response to CPSD DR 1 Q 7 Atch. 2, Summary Inventory, p. 3	55
145	CPSD Exhibit 2, p. 7-8	55
146	CPSD Exhibit 4, p. 10, lines 20-22	55
147	CPSD Exhibit 2, p. 9.	56
148	CPSD Exhibit 6: citing P2-212, P2-225, P2-227 and P2-230. In particular, PG&E internal policies shown in its documents P2-212, P2-225, and P2-227 each require that “Records pertinent to the constructed facility retain until superseded or 6 years after the facility is retired”. Moreover, PG&E internal policy in its documents P2-230 mandates retaining engineering records for 6 years after the facility is retired.	57
149	CPSD Exhibit 2, p. 9, lines 11-16	58
150	PG&E Exhibit 61, p. 4-20.	58
151	CPSD Exhibit 4, pp. 11-14	58
152	PG&E Exhibit 61, pp. 4-20	58

153	CPSD Exhibit 4, pp. 11and 12	59
154	Id.	59
155	Id.	59
156	Id.	59
157	CPSD Exhibit 4, p. 12 incorrectly identified the drawing as #282067. The correct drawing number is #383510.	59
158	PG&E Exhibit 61, p. 4-21	59
159	CPSD Exhibit 4, p. 12, lines 18-19	59
160	PG&E Exhibit 61, p. 4-21	60
161	CPSD Exhibit 4, p. 13, lines 3-5	60
162	CPSD Exhibit 4, pp. 11 and 12	60
163	CPSD Exhibit 2, p. 10	61
164	CPSD Exhibit 2, p. 11, lines 11-14	61
165	CPSD Exhibit 2, p. 10, lines 5-7	62
166	CPSD Exhibit 2, pp. 10 and 11, fn. 45	62
167	PG&E Exhibit 61, p. 4-25, lines 7-10. Based on the response to CPSD DR 67 Q 46, we assume the cable PG&E references was a standard USB cable.	62
168	PG&E Exhibit 61, p. 4-25, lines 16-19.	62
169	CPSD Exhibit 4, p. 14	62
170	CPSD Exhibit 2, pp. 11 and 12.	64
171	Id.	64
172	CPSD Exhibit 2, fn. 50: citing PG&E Response to CPSD DR 1 Q 14, Atch. 2.	64
173	CPSD Exhibit 2, p. 12, lines 8 and 9 and fn. 54.	65
174	CPSD Exhibit 2, fn. 50: citing PG&E Response to CPSD DR 1 Q 14, Atch. 2.	65
175	CPSD Exhibit 6, fn. 1, Atch. 1 p. 124, Finding 124 (NTSB August 30, 2011 Accident Report).	65
176	PG&E Exhibit 61, p. 4-27, line 20 through p. 4-28, line 3.	65
177	PG&E Response to CPSD DR 68 Q 3, Declaration of Keith Leewis, PAGE 7	65
178	PG&E Exhibit 61, p. 4-28, line 18-21, but, there are miles of gas pipeline in San Bruno.	65
179	PG&E Exhibit 61, p. 4-26, lines 6-7.	65
180	49 CFR §192.615 (a)(3).	67

181	CPSD Exhibit 2, p. 12.	67
182	CPSD Exhibit 4, p. 16, fn. 86. Communications are based on Transcript of SF control room calls Sept 9, 2010	67
183	CPSD Exhibit 6, fn. 1, Atch. 1 pp. 5-12 (NTSB August 30, 2011 Accident Report).	67
184	Id. at pp. 12 and 15.	68
185	PG&E Exhibit 61, p. 4-55, lines 21-26.	68
186	CPSD Exhibit 4, p. 16, line 14	68
187	Id. at p. 124, finding 12.	68
188	NTSB Record #455567, Sept. 17, 2010 (National Transportation Safety Board investigation. Pacific Gas and Electric Company Natural Gas Transmission Pipeline Rupture and Fire, San Bruno, California, September 9, 2010.) : Interview of M. Hickey, 16 Sep 2010.	69
189	CPSD Exhibit 4, p. 16, lines 10-13.	69
190	CPSD Exhibit 4, p. 16, lines 14-15.	69
191	CPSD Exhibit 4, fn. 90.	69
192	CPSD Exhibit 4 p. 16, fn. 89.	69
193	PG&E Ex 61, pp. 4-52 to 4-57.	69
194	CPSD Exhibit 4. p. 17.	70
195	CPSD Exhibit 2, p. 2, lines 21 – p. 6.	71
196	CPSD Exhibit 2, fn. 23: citing PG&E Response to CPSD DR 15 Q 1, Atch. 358.	72
197	CPSD Exhibit 2, fn. 23: citing PG&E Response to CPSD DR 15 Q 1, Atch. 253.	72
198	CPSD Exhibit 4, fn. 94: citing PG&E Response to CPSD DR 188 Q 13, Atch. 1, p. 13, Transcript: SF_9.9.2010_2.05.43_PM_11.57.23_PM_20110113,p. 242 (.wav file #307939000393937) and p. 668 (.wav file #307939000394349).	72
199	CPSD Exhibit 2, fn. 23: citing PG&E Response to CPSD DR 15 Q 1, Atch. 136, 138, 188, 255 and 358.	72
200	Id.	72
201	CPSD Exhibit 4, fn. 94: citing PG&E Response to CPSD DR 188 Q 13, Atch. 1, p. 13.	72
202	CPSD Exhibit 4, fn. 98: citing PG&E Response to CPSD DR 7 Q1 09.09.2010-4, Investigation & Documentation Report (for Documenting Abnormal Operations).	72
203	PG&E Exhibit 61, p. 4-11, line 21.	72
204	These actions are named as violations in the San Bruno proceeding, I.12-01-007.	72
205	D.09-08-029, p. 26.	73

206	Id. at 25.	74
207	*Williard v. Caterpillar, Inc*., 40 Cal. App. 4th 892, 907 (1995).	74
208	*Peat, Marwick, Mitchell & Co.,* 200 Cal. App. 3d 272, 287-88 (1988).	75
209	Id. at 97 (citations omitted).	75
210	*Cedars-Sinai Med. Ctr. v. Superior Court*, 18 Cal. 4th 1, 11 (1998).	75
211	*Galanek v. Wimas*, 68 Cal. App. 4th 1417, 1428 (1999).	75
212	CPSD Exhibit 65 (Recording and Transcript), Explained by PG&E during a site visit to the Brentwood Control Room.	75
213	CPSD Exhibit 3, p. 2, lines 1-5.	76
214	CPSD Exhibit 4, fn. 102: citing PG&E Response to CPSD DR 8 Q 16.	76
215	CPSD Exhibit 2, fn. 2: citing PG&E Response to CPSD DR 43 Q 5, also Response to CPSD DR_CPUC_210.	76
216	CPSD Exhibit 4, fn. 103: citing PG&E Response to CPSD DR 8 Q 16, Rev 1 (Amended).	76
217	CPSD Exhibit 3, fn.100 (PG&E's General Counsel's Instructions, Appendix A to Felts Supplemental Report March 30, 2012).	77
218	PG&E Exhibit 61, p. 5-3, lines 18-23.	78
219	PG&E Exhibit 5-8; PG&E Response to CPSD DR 8 Q 16.	78
220	PG&E Exhibit 5-9; PG&E Response Revision 01 to CPSD DR 8 Q16.	78
221	Id.	79
222	Rule 1 was the predecessor of Rule 1.1.	80
223	Sprint PCS, D.01-08-019, mimeo, at 8-9.	81
224	Sprint PCS, D.01-08-019, mimeo, at 9.	81
225	Sprint PCS, D.01-08-019, mimeo, at 14.	81
226	Sprint PCS, D.01-08-019, mimeo, at 14.	81
227	Sprint PCS, D.01-08-019, mimeo, at 16.	82
228	PG&E Exhibit 61, p. 5-3, lines 18-23.	83
229	PG&E Exhibit 61, p. 5-3, lines 23-24.	83
230	PG&E Exhibit 61, p. 5-3, lines 18-19.	83
231	CPSD Exhibit 3, fn. 10: citing PG&E Response to CPSD DR 8 Q 8(d) submitted by PG&E on October 10, 2011.	84
232	CPSD Exhibit 3, fn. 11: citing PG&E Response to CPSD DR 30 Q 2 submitted by PG&E on December 17, 2011.	84

233	CPSD: Exhibit 3, p; 7, l. 15 and fn. 12: CITING SF_9.9.2010_2.05.43_PM_11.57.23 PM_20110113 (NTSB Exhibit no. DCA 10MP008, NTSB electronic file number 471554, unredacted).	85
234	PG&E Exhibit 61, p. 5-4, lines 13-14.	85
235	CPSD Exhibit 3 p. 8.	85
236	PG&E Exhibit 5-14; PG&E Response to DR 30, Q 02.	85
237	PG&E Exhibit 61, p. 5-4, lines 10-13.	86
238	PG&E Exhibit 5-13; PG&E Response to DR 8, Q 8(d).	86
239	PG&E Exhibit 5-14; PG&E Response to DR 30, Q 2.	86
240	CPSD Exhibit 4, fn. 116: citing PG&E Response to CPSD DR 77 Q 1. On August 17, 2012, PG&E responded to CPSD DR 77 Q1 with a complete list of the PG&E personnel who were present at the Milpitas Terminal on September 9, 2010. This list included [named employee], showing he was present after 8:30 PM on the 9th.	86
241	This violation is related to but independent of the Duller / North violations presented in section VI of this document. The primary purpose of Violation 16 is to state a violation for the reduction in safety engineering caused by the problems with the job files. The Duller / North violations in Section VI of this document are based upon an in depth analysis of how and why the job files are deficient from a recordkeeping perspective. Therefore, for Violation 16, CPSD incorporates by reference the Duller / North references to job files, in section VI of this document.	87
242	49 CFR whatever requires gas operators to follow their own safety rules and policies. Therefore PG&E's violation of its own rules constitutes a violation of the federal gas regulations and GO 112.	88
243	I.11-02-016 Pre-Hearing Conference, May 9, 2011, Tr. p. 62.	88
244	I.11-02-016 Pre-Hearing Conference, November 1, 2011, Tr. p167.	88
245	Records include, but are not limited to, the design and specifications of the pipe and equipment installed, contracts for installation, the location of the pipe underground, pressure test results, weld information, x-rays, and records related to salvaged pipe and materials	88
246	See Violation 25	88
247	Based on review of PG&E's job files that include project and accounting records.	89
248	CPSD Exhibit 2, fn. 125: citing PG&E Response to CPSD DR 51 Q 4.	89
249	CPSD Exhibit 2, fn. 126: citing PG&E Response to CPSD DR 17 Q 5.	89
250	CPSD Exhibit 2, fn. 127: citing PG&E Response to CPSD DR 17 Q 5	89
251	CPSD Exhibit 4, p. 23, lines 8-11.	89
252	PG&E Response to CPSD DR 4 Q 5-6, PG&E repeats this response for several time frames in Table 2A-2 of its June 20, 2011 filing.	89

253	CPSD Exhibit 6, pp. 6-53 through 6-59.	90
254	PG&E Exhibit 61 p. 1-1.	90
255	PG&E Exhibit 61.	90
256	CPSD Exhibit 2, p. 32, line 11 and fn. 128.	90
257	Tr. Vol. 3 Joint, Harrison/PG&E.	90
258	CPSD Exhibit 4, p. 23, line 19.	91
259	CPSD Exhibit 4, p. 23, line 24-25.	91
260	CPSD Exhibit 4, fn. 123.	91
261	CPSD Exhibit 4, fn. 124: citing PG&E Response to CPSD DR 67 Q 26.	91
262	CPSD Exhibit 4, fn. 125: citing PG&E Response to CPSD DR 73 Q 4. Examples are GM 134655, Advanced Purchase of Pipeline for 1956 Projects; GM 119689, Blanket Account for Pipe 1953-1967; GM 110690 Blanket Account for Cable; and GM 115991-118686, GM 119690-121258, all described as Blanket accounts for pipe, pre 1953.	91
263	CPSD Exhibit 1.	93
264	CPSD Exhibit1, p. 26.	93
265	CPSD Exhibit1, pp. 27 and 28 citing PG&E's data response, P2-400 Pipeline Survey manual, 1986, p. 90.	93
266	CPSD Exhibit 2, fn. 106: citing P2-400, p. 92 and fn. 116: citing P2-2, p. 37.	94
267	CPSD Exhibit 2, fn. 106: citing P2-400, p. 91.	94
268	CPSD Exhibit 2, fn. 106: citing P2-400, p. 92. Supplement, p. 2, "Records," Sec 12: "The complete and main history files shall be maintained up to date by the Division or department for the life of the operating facility."	94
269	CPSD Exhibit 2, fn. 106: citing P2-400, p. 91.	94
270	CPSD Exhibit 2, fn. 120: citing PG&E Response to CPSD DR 7 Q9.	94
271	CPSD Exhibit 2, fn. 121: citing PG&E Response to CPSD DR 7 Q9.	94
272	CPSD Exhibit 2, fn. 122: citing Response to CPSD DR 34 Q 1 Atch. 5.	95
273	CPSD Exhibit 2, p. 29, section 4.1.2.	95
274	CPSD Exhibit 2, fn. 106: citing P2-400, p. 91.	95
275	PG&E Exhibit 61, p. 2-21, line 27.	95
276	PG&E Exhibit 61, p. 2-21, lines 29-31.	95
277	Based on review of thousands of records in the ECTS database.	95
278	PG&E Exhibit 61, p. 2-23, lines 3-4.	95

279	PG&E Exhibit 61, p. 2-20, fn. 19 and line 5 through p. 2-21, line 28. GO 112-C with its accompanying D.78513, is PG&E Exhibit 5 in the record herein, which was useful for cross-examination. GO 112-E, Commission's Decision No..95-08-053, as modified by Decision No.95-12-065, and its Appendix A, is Exhibit No. PG&E-7. However, hereinafter, the CPUC shall simply refer to these General Orders as GO 112-C or GO112-E without mentioning the specific "Exhibit" Numbers.	96
280	PG&E Exhibit 61, pp. 2-7, line 26, through 2-10, line 17.	96
281	PG&E Exhibit 61, p. 2-11, lines 7-9.	96
282	House Report No. 1390, quoted in U.S. Code, Cong. and Admin. News (90th Congress, Second Session) (1968), p. 3228.	97
283	NGPSA, 49 U.S.C. §60105(a) & (b).	97
284	Commission's Decision No. 78513 and its Appendix A, GO 112-C with relevant excerpts of 49 CFR §192 (1970).	98
285	In Decision No. 78513, which adopted GO 112-C, the Commission also found: "It is recognized that no code of safety rules, no matter how carefully and well prepared, can be relied upon to guarantee complete freedom from accidents. Moreover, the adoption of precautionary safety rules does not remove or minimize the primary obligation and responsibility of gas corporations to provide safe service and facilities in their gas operations. Officers and employees of the gas corporations must continue to be ever conscious of the importance of safe operating practices and facilities and their obligation to the public in that respect.".	98
286	See GO 112-C, pp. 114-115, adopting, 49 CFR §192.517 (1970) (Emphasis added).	99
287	See also Order No. 450 (1972), 47 FPC 871, 875, which is referred to in PG&E's Response, p. 2-10, lines 8-9 and its exhibits 2-18, 2-19, 2-20, and 2-21.	100
288	The Commission subsequently amended its GO 112-C twice. The first time was in 1979, when the Commission issued its Decision No. 90372, to adopt GO 112-D to establish Liquefied Natural Gas (LNG) safety standards for a proposed LNG project at Point Conception. The second time was in 1995, when, as discussed above, the Commission issued its Decision No. 95-08-053 to adopt its GO 112-E in order to automatically adopt all new DOT safety requirements.	100
289	PG&E Exhibit 61, p. 2-21, lines 24-28.	101
290	CPSD Exhibit 2, p. 33, lines 16-17.	102
291	Id. at 33.	103
292	CPSD Exhibit 10 and PG&E response to CPSD DR 33, Q 10	103
293	CPSD Exhibit 2, fn. 136: citing PG&E responses to CPSD DRs 18 Q.8 and Attachments 1, 6(1983), P2-939 (1986), and .14 (2003 through current as Aug. 20, 2012 report date.	103
294	CPSD Exhibit 2, fn. 136: citing PG&E responses to CPSD DRs 18 Q.8 and Attachments 1, 6(1983), P2-939 (1986), and .14 (2003 through current as Aug. 20, 2012 report date. Standard Practices have continued to require test records to be maintained for the life of the pipeline asset.	103

295	CPSD Exhibit 6 p. 6-49_Inability to locate safety critical pipeline information Table 6.7.	103
296	CPSD Exhibit 6 p. 5-23 §5.3.1 lines 9-26	103
297	Id.	103
298	Id. and Reference Harrison Admission.	103
299	Id.	103
300	TURN Exhibit 4, and PG&E's massive response to CPSD-TURN Joint DR 1-1	103
301	CPSD Exhibit 4, pp. 30 and 31, lines 4-6, and fn. 147, 148, and 149	104
302	TURN Exhibit 4.	104
303	TURN Exhibit 4, p. 2, and Tr. Vol 6, pp.966 and 967, Singh/ PG&E	104
304	Id. at p. 2.	104
305	Tr. Vol. 6, p. 963, Singh/PG&E	104
306	PG&E Exhibit 61, p.1-1	105
307	PG&E response to CPSD DR 4, Q 5 and 6	105
308	CPSD Exhibit 4, p. 30, lines 4-6, and fn. 147 and 148	106
309	CPSD Exhibit 6, fn. 1, Attachment 1 pp. 5-12 (NTSB August 30, 2011 Accident Report).	107
310	CPSD Exhibit 10: PG&E Response to CPSD DR 15 Q 6, Atch. 3, pp. 124-125.	107
311	CPSD Exhibit 10: Response to CPSD DR 15 Q 6.	107
312	PG&E Exhibit 61, p. 3.	108
313	CPSD Exhibit 2, p. 33, lines 16-17.	108
314	California Public Utilities Code §2108.	108
315	D 98-12-075, 84 CPUC 2nd at 184.	109
316	CPSD Exhibit 10: PG&E Response to CPSD DR 15 Q 6.	111
317	CPSD Exhibit 2, fn. 138: citing P2-1286 (PG&E Standard Practice 1605).	111
318	CPSD Exhibit 2, p. 36.	111
319	CPSD Exhibit 2, p. 35.	111
320	PG&E Exhibit 61.	111
321	CPSD Exhibit 2, pp. 34-37.	111
322	Based on Felts review of PG&E job files in ECTS.	111

323	Examples of relevant uses of the information include Integrity Management Model inputs such as joint efficiency, girth welding process, longitudinal seam design, and joint type (girth weld geometry). X-ray reports may also provide information about individual weld quality that may have been acceptable when the inspection was completed but may now be considered a potential problem, such as voids or cracks in a weld.	112
324	PG&E Exhibit 61.	112
325	I.11-02-016, "Pacific Gas and Electric Company's Response", June 20, 2011, P7-0047 Index of documents produced with Report.	112
326	CPSD Exhibit 6, Chapters 1-6.	112
327	Based on Felts review of job files in ECTS.	112
328	CPSD Exhibit 4, p. 32, lines 6-7.	112
329	CPSD Exhibit 2, p. 36, lines 17-20.	112
330	CPSD Exhibit 2, p. 36 and documents cited fn. 148 of Exhibit 2.	113
331	PG&E Exhibit 61, p. 3-53.	113
332	PG&E Exhibit 61, p. 3-55.	113
333	CPSD Exhibit 2, fn. 116, citing P2-2 (also, FERC 36A (18 CFR §125); June 10, 1920, Ch. 285, pt. III, §302, as added Aug. 26, 1935, Ch. 687, title II, §213, 49 Stat. 855; ASA B31.1.8-1955). Life of the asset records part of construction Job File to be kept.	113
334	Tr. Vol. 11, p. 1634.	113
335	CPSD Exhibit 2, p. 37, line 10.	115
336	Id.	115
337	CPSD Exhibit 2, fn.155: citing P3-27410, p. 2.	115
338	CPSD Exhibit 2, p. 37, lines 13-18.	115
339	CPSD Exhibit 2, fn. 156: citing P2-390, p. 26. DG-IGDA is Internal Corrosion Direct Assessment for a dry gas pipeline.	116
340	CPSD Exhibit 2. p. 38, lines 1-2.	116
341	CPSD Exhibit 4, fn. 98: citing PG&E Response to CPSD DR 7 Q 1, Abnormal Incident Reports.	116
342	CPSD Exhibit 2, fn. 158: citing PG&E Response to CPSD DR 4 Q 9.	116
343	CPSD Exhibit 2, p. 38, lines 7-8.	116
344	CPSD Exhibit 2. PG&E Response to CPSD DR 15 Q 10.	116
345	CPSD Exhibit 6, fn. 1, Atch. 1 p. 94 (NTSB August 30, 2011 Accident Report).	116
346	PG&E Exhibit 61, p. 3-59, lines 1-6.	117

347	CPSD Exhibit 2, p. 37-38 and fn. 156: citing P2-390, p. 26.	117
348	CPSD Exhibit 2, fn. 156: citing P2-390, p. 26. DG-IGDA is Internal Corrosion Direct Assessment for a dry gas pipeline.	117
349	CPSD Exhibit 4, p. 33, lines 1-4.	117
350	CPSD Exhibit 2, fn. 110: Citing P2-158, p. 29.	118
351	Pub. Util. Code §451; Pub. Util. Act Article II §13(b); ASME Standards §B31.8; General Orders 112, 112A, and 112B, §107.	118
352	CPSD Exhibit 2, fn. 168: citing P2-1149. Indicates it replaced a 1958 version. CPSD does not comment in this brief about the effectiveness of the pre-1970 leak detection program itself, insofar as it may have been designed to detect and fix leaks before 1970. The deficiencies we allege pertain specifically to the records of leaks from the leak detection program and from other sources. We do note, however, that ultimately the effectiveness of any complex program using data depends on records.	119
353	PG&E Exhibit 61, p. 3-60, lines 23-26.	119
354	CPSD Exhibit 3, p. 17, Adds P3-24246 to fn. 169: examples of A-forms.	119
355	CPSD Exhibit 2, fn. 171: citing PG&E Response to CPSD DR 40 Q2.	119
356	PG&E Exhibit 61, p. 3-63, lines 22-23.	120
357	PG&E Exhibit 61, p. 3-61, lines 2-3, and P2-1152.	120
358	PG&E Exhibit 61, p. 3-61, lines 2-3 and lines 10-13.	120
359	CPSD Exhibit 4, p. 33, lines 11-14.	120
360	CPSD Exhibit 2, fn. 106: citing P2-400, p. 91.	120
361	CPSD Exhibit 55, The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O. 1984 Bechtel Report, pp. 7 and 8, and Appendix C.	121
362	CPSD Exhibit 8, fn. 101 and 102: citing PG&E Response to CPSD DR 69, Q 6.	121
363	PG&E Response to CPSD DR 25, Q 2(i) Supp02Atch.17.	121
364	PG&E Response to CPSD DR 25, Q 2(i) Supp02Atch.02, p. 2-3.	121
365	PG&E Response to CPSD DR 25, Q 2(i) Supp02Atch.02, p. 2-3.	121
366	CPSD Exhibit 55, pp. 7 and 8, and Appendix C. The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O.	121
367	Calif. Pub. Util. Code §451.	122
368	CPSD Exhibit 2, Appendix 8 (Inspection Records-Leak Repair of Pipe Exposure Row). In particular, PG&E internal policies shown in its documents P2-212, P2-225, P2-227, and P2-230 each require that inspection records for leak repairs or pipe exposure be kept for the life of the facility. These policies apply from 1994 to 2010.	122

369	CPSD Exhibit 2, Appendix 8 (Leak Survey Maps row). In particular, PG&E policy P2-220 requires keeping leak survey maps for nine years. This policy is effective as of 2010.	122
370	Calif. Pub. Util. Code §451; ASME Code §B31.8; General Orders 112, 112A, and 112B, §107.	122
371	PG&E Response to CPSD DR 69, Q 6.	122
372	CPSD Exhibit 8, fn. 101 and 102: citing PG&E Response to CPSD DR 69, Q 6.	122
373	PG&E Response to CPSD DR 25, Q 2(i) Supp02Atch.17.	122
374	CPSD Exhibit 55, p. 8. The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O.	122
375	PG&E Response to CPSD DR 25, Q 2(i) Supp02Atch.02, p. 2.	123
376	PG&E Exhibit 61 p. 3-63, line 34 through 3-64, lines 1-4.	123
377	See CPSD Exhibit 6 for more specific discussion of how leak data was handled.	123
378	The annotation on a pipeline survey sheet was simply the placement of an icon on a row in the table shown above a sketch on that pipeline survey sheet. For example, see PG&E Response to CPSD DR 7 Q 12 Atch. 51, See icons on line labeled "Leaks".	123
379	PG&E Exhibit 61, p. 3-64, line 32.	123
380	CPSD Exhibit 2, p. 19, lines 16-24.	123
381	CPSD Exhibit 4, p. 34, line 15.	123
382	CPSD Exhibit 2, p. 26, lines 10-18.	124
383	CPSD Exhibit 2, fn. 174.	125
384	PG&E says that it currently requires pipeline materials to satisfy specifications and standards set forth in its own Standards A-16 and A-34, and currently has a policy that prohibits the installation of reconditioned or used transmission pipeline fittings, such as elbow, tees, reducers and caps. See PG&E Response to CPSD DR 10 Q5 and DR 10 Q5, Atch. 3.	125
385	CPSD Exhibit 2, fn 172: citing PG&E Response to CPSD DR 33, Q 10, Atch. 2, p. 3.	125
386	For instance, PG&E had a special inspection process for A.O. Smith pipe that was initially installed in the 1920s-30s as "PG&E Spec Pipe", then later salvaged and reused in the 1950's – 60's. Response to CPSD DR10 Q 5 Atch. 06.	125
387	CPSD Exhibit 2, fn. 173: citing PG&E Response to CPSD DR 16, Q1; PG&E Response to CPSD DR 10, Q 5 and DR 10, Q 2.	126
388	CPSD Exhibit 2, p. 43, lines 6-8.	126
389	PG&E Exhibit 61.	126
390	Project Number GM 98015.	126

391	Pacific Gas and Electric Company's Updated Supplemental Response to Legal Division's "Notice and Disclosure of Safety Evidence and Companion Motion for Public Release of Evidence". I.11-02-016. Filed November 11, 2011.	126
392	CPSD Exhibit 2, fn. 187: citing PG&E Response to CPSD DR 16, Q5.	126
393	CPSD Exhibit 2, fn. 188: citing PG&E Response to CPSD DR 39, Q1.	126
394	CPSD Exhibit 2, p. 46, lines 12-14.	127
395	Id., l. 13-18.	127
396	PG&E Exhibit 61, p. 3-28, lines 19 -20.	127
397	PG&E Exhibit 61, p. 3-33, lines 26 – 28.	128
398	PG&E Exhibit 61, p. 3-32, lines 1-2.	128
399	CPSD Exhibit 4, fn. 17: citing PG&E Response to CPSD DR 33, Q 3, Atch 11, page 3, June 5, 1944. Note that the 1938 Code section PG&E cited in this letter excludes filming of cash and journal vouchers. As it turns out, Journal Vouchers are an important type of record in tracing salvaged pipe because they show both the project GM number from which pipe was salvaged and the project GM number that received the salvaged pipe. To date, PG&E has not produced an independent set of Journal Vouchers, so we may assume those were also lost.	128
400	CPSD Exhibit 4, p. 35, lines 28-29.	129
401	CPSD Exhibit 4, p. 36, lines 1-2.	129
402	CPSD Exhibit 4, p. 35, fn. 174.	129
403	CPSD Exhibit 4, p. 35, fn. 175.	129
404	CPSD Exhibit 4, p. 35, fn. 176.	129
405	CPSD Exhibit 4, p. 35, fn. 177.	129
406	CPSD Exhibit 4, p. 35, fn. 178.	129
407	Cal. Pub. Util. Code §451.	131
408	PG&E Exhibit 62, p. 3-66, lines 16-18.	131
409	CPSD Exhibit 2, fn. 190: citing PG&E Response to CPSD DR 27, Q 12 and Q 13.	131
410	CPSD Exhibit 2, fn. 191: citing PG&E Response to CPSD DR 27 Q 12 Attachments 1 and 2.	131
411	For more discussion and references to the record showing assumed, missing, and inaccurate elements in GIS, please refer to subsections vii, viii, xi, and xii, of section VI.A. Violation A1.3.b.	131

412	PG&E Response to CPSD DR 30, Q 15. GSAVE stands for "Gas System Asset Visual Explorer, was PG&E's first gas transmission GIS program, and was deployed in May 1998. GSAVE was a customized program composed of scripts and tools built using ESRI's ArcInfo 7.x and ArcView 3.x software base. GSAVE was operational until November 2003. GasMap 1.0 and GasView 1.0 replaced GSAVE in November 2003. GasMap and GasView were also custom GIS applications developed by PG&E using ESRI ArcGIS 8.x software. GasMap and GasView migrated to ArcGIS version 9.x in 2005. PG&E deployed GasMap 2.0 in July 2011. GasMap2.0 is based on ArcGIS 9.3.1.	131
413	For more discussion and references to the record showing assumed, missing, and inaccurate elements in GIS, please refer to subsections vii, viii, xi, and xii, of section VI.A. Violation A1.3.b.	131
414	CPSD Exhibit 2, fn. 192: citing PG&E Response to CPSD DR 64, Q3. This is PG&E's response to CPSD DR 215, Q6 in I.12-01-007.	132
415	CPSD Exhibit 2, fn. 193: citing PG&E Response to CPSD DR 7, Q 12, Atch. 83.	132
416	CPSD Exhibit 2, fn. 193: citing PG&E response to CPSD DR 45, Q 8.	131
417	PG&E Exhibit 61, p. 3-66, lines 14-15.	132
418	PG&E Exhibit 61, p. 3-54, lines 3-4.	132
419	Although CPSD has chosen not to charge PG&E with violations until the effective date of the IM additional to the CFR. PG&E's actions justify a starting date in the early 1980's for this violation	134
420	CPSD Exhibit 2, fn. 129: citing P2-158. PG&E defines the integrity management procedure as one "designed to provide the best methods and implementation to ensure the safety of gas transmission pipelines located where a leak or rupture could do the most harm" , p. 9. CPSD suggests that this is also a good and useful definition, and that by PG&E's own goals and terms, the company has failed to meet its own test.	135
421	49 CFR §192 Subpart O.	135
422	CPSD Exhibit 6, fn. 1, Atch. 1 (NTSB August 30, 2011 Accident Report – 140pp)	135
423	CPSD Exhibit 2, pp. 24 and 25.	13
424	CPSD Exhibit 2, sections 3 and 4.	136
425	NTSB September 9, 2010 Preliminary Report, Accident No. DCA10MP008, p. 125.	136
426	Id. at p. 110.	136
427	P2-159 (RMP-08), p. 18.	137
428	PG&E Exhibit 61, pp. 1-10 through 1-15. P2-159 p. 22, underline added. CPSD underlined this material to note that, before the San Bruno explosion, PG&E internally had ordered verification of data quality and consistency. PG&E now argues that verifiable data represents a brand new standard. This argument is contradicted by PG&E's risk management procedure.	137
429	P2-159 (RMP-08), p. 23.	137

430	CPSD Exhibit 55, pp. 6 and 7 (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	138
431	CPSD Exhibit 2, p. 19, l. 18-19.	138
432	CPSD Exhibit 2, p. 19, l. 25	138
433	PG&E Exhibit 61, p. 2-23.	139
434	Tr. Vol. 3 Joint, p. 431, Harrison/PG&E.	139
435	Tr. Vol. 3 Joint, p. 431, Harrison/PG&E.	139
436	CPSD Exhibit 55, p. 11 (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	139
437	This describes the pipe that failed on September 9, 2011, installed in 1956, DSAW, and unknown manufacturer.	140
438	CPSD Exhibit 2, fn. 129: citing P2-158, p. 29.	140
439	CPSD Exhibit 55, p. 11 (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	140
440	Tr. Vol. 3, p482-483.	140
441	CPSD Exhibit 55, p. 11 (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	140
442	CPSD Exhibit 6, fn. 1, Atch. 1 p. 60 (NTSB August 30, 2011 Accident Report).	140
443	CPSD Exhibit 2, p. 20, l. 14-23.	141
444	CPSD Exhibit 55, pp. 7 and 8.	142
445	Id. See figure 5.	142
446	In reports after 1984 PG&E and Bechtel retreated from their "three leaks and you're out" pipe replacement. In CPSD's view, this retreat was poorly considered, and result and cost driven, rather than safety oriented.	142
447	See Violation 26 for discussion of 1988 leak report – PG&E's integrity management engineer charged with the responsibility of reviewed line 132, Segment 180, testified that he would have wanted to see records of the 1988 failure when assessing Segment 180.	142
448	CPSD Exhibit 6, fn. 1, Atch. 1 pp. 109-110 (NTSB August 30, 2011 Accident Report).	142
449	PG&E Response to CPSD DR 42, Q 06, Atch 01, p.1: PG&E audit report, April 9, 2008.	143
450	Id. at p. 2.	143
451	CPSD Exhibit 55, Appendix B. (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	143

452	The only alternatives to written records establishing safety, are to replace the entire system of problematic pipes, or to dig up the pipes and either hydrostatically test them, pig test them, and/or get the needed information by inspection. This is expensive, as PG&E ratepayers and shareholders have learned in the PSEP proceeding and will learn more in coming years.	144
453	I.11-02-016, "Pacific Gas and Electric Company's Response", June 20, 2011, p. 4-1, and 5-1 through 5 -5.	144
454	CPSD Exhibit 6, fn. 1, Atch. 1 p. 110 (NTSB August 30, 2011 Accident Report).	144
455	CPSD Exhibit 6, fn. 1, Atch. 1 p. 25 (NTSB August 30, 2011 Accident Report).	144
456	See Violation 26.	144
457	See Violation 26.	144
458	CPSD Exhibit 6, fn. 1, Atch. 1 pp. 109-110 (NTSB August 30, 2011 Accident Report).	144
459	CPSD Exhibit 6, fn. 1, Atch. 1 p. 46 (NTSB August 30, 2011 Accident Report).	145
460	CPSD Exhibit 6, fn. 1, Atch. 1 pp. 61 and 108 (NTSB August 30, 2011 Accident Report).	145
461	CPSD Exhibit 6, fn. 1, Atch. 1 p.110 (NTSB August 30, 2011 Accident Report).	145
462	CPSD Exhibit 2, fn. 152: citing PG&E Response to CPSD DR 3, Q 10. PG&E Response to PG&E believes that the reconditioning of pipes consisted of cleaning the pipe, grinding down the ends, and re-wrapping the pipe before installation in the ground. PG&E's belief apparently stems from conversations with personnel, because the company lacks documentation showing reconditioning requirements during the time re-conditioning was done.	146
463	I.11-02-016 Pre-Hearing Conference, November 1, 2011, Tr. pp. 162 and 163.	146
464	PG&E Exhibit 61, p. 3-28; and PG&E response to CPSD DR 16, Q 1 and DR 10 Qs 2 and 5.	146
465	I.11-02-016 Pre-Hearing Conference, November 1, 2011, Tr.	146
466	CPSD Exhibit 55, p. 8 (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	147
467	Id. at p. 9.	147
468	CPSD Exhibit 55, p. 8 (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	148
469	Id. Appendix B.	148
470	CPSD Exhibit 6, fn. 1, Atch. 1 p. 61 (NTSB August 30, 2011 Accident Report).	148
471	CPSD Exhibit 6, fn. 1, Atch. 1 p. 108 (NTSB August 30, 2011 Accident Report).	148
472	CPSD Exhibit 6, fn. 1, Atch. 1 p. 108 (NTSB August 30, 2011 Accident Report).	148
473	CPSD Exhibit 6, fn. 1, Atch. 1 p. 43 (NTSB August 30, 2011 Accident Report).	148

474	CPSD disagrees with PG&E's contentions that in 1956 the company hydrostatically tested the pipe that failed in 2010, or that it failed without exceeding MAOP. CPSD's point is that PG&E recognizes that pressure – water or pressure induced – can and does cause pipes to fail.	149
475	CPSD understands cyclic fatigue to be the potential for metal damage caused by significant changes in pressure over time.	149
476	CPSD Exhibit 2, p. 38, line 10-24.	149
477	PG&E Exhibit 61, p. 3-65.	150
478	PG&E Exhibit 61, p. 3-44 Figure 3C-2.	150
479	Tr. Vol. 12, p. 1893.	150
480	CPSD Exhibit 6, fn. 1, Atch. 1 p. 109 (NTSB August 30, 2011 Accident Report).	150
481	CPSD Exhibit 6.	151
482	CPSD Exhibit 6.	151
483	CPSD Exhibit 2, p. 26.	151
484	CPSD Exhibit 2, p. 26.	151
485	CPSD Exhibit 55, p. 1, "The purpose of this Risk Analysis is to aid PG&E in selecting the order of replacement for the various lines that fall under the scope of their pipeline replacement program"	151
486	CPSD Exhibit 55, pp. 6 through 13 (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	152
487	CPSD Exhibit 2, p. 26.	152
488	CPSD Exhibit 2, p. 22, fn. 89 pp. 3-4, (May 1995 Bechtel Report).	152
489	CPSD Exhibit 55, p. 8, (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	152
490	See Violation C.3: Leak Records pp. 218-224.	152
491	Id. at 7.	152
492	CPSD Exhibit 55 (The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O.).	152
493	CPSD Exhibit 2, p. 19.	153
494	CPSD Exhibit 2, fn. 102: citing PG&E Response to CPSD DR 57, Q 6.	53
495	CPSD Exhibit 4, p. 38.	153
496	Id.	153
497	49 CFR §192.107.	154

498	CPSD Exhibit 6, fn. 1, Atch. 1 p. 108 (NTSB August 30, 2011 Accident Report).	154
499	CPSD Exhibit 64; PG&E Response to Joint DR 1 Q 2, Atch. 1.	154
500	CPSD Exhibit 2, fn. 129: citing P2-158, p. 29.	155
501	CPSD does not contend that the reuse of pipe is an unsafe or unlawful practice. We do contend that PG&E's loss of information about the location and characteristics of reused pipe is a clear violation of §451 and a patently unsafe practice.	156
502	PG&E Exhibit 61, p. 3-32.	156
503	PG&E Exhibit 61, p. 4-2.	156
504	PG&E Exhibit 61, pp. 3-28 through 3-31.	156
505	I.11-02-016 Pre-Hearing Conference, November 1, 2011, Tr. pp. 156 and 157.	156
506	Id.	156
507	PG&E Exhibit 61, p. 3-32.	156
508	CPSD Exhibit 2, fn. 138: Citing P2-1286, p. 34.	158
509	CPSD Exhibit 2, fn. 138: citing P2-1286 (PG&E Standard Practice 1605).	158
510	CPSD Exhibit 2, fn. 138: citing P2-1286 (PG&E Standard Practice 1605). PG&E Standard Practice 1605 required keeping Weld Inspection Reports for the life of the facility.	158
511	CPSD Exhibit 3, p. 17, Item 37, fn.#154 and PG&E Response to CPSD DR 41, Q 5 Supp. 1 Atch. 1.	158
512	PG&E Exhibit 61, lines 20-25.	159
513	CPSD Exhibit 4, fn.192: MAOP09002459.	159
514	Pipeline Rules of Thumb Handbook, 7th Edition, 2009, p. 71.	159
515	Pipeline Rules of Thumb Handbook, 7th Edition, 2009, p. 71.	159
516	"Welding Criteria Permit Safe and Effective Pipeline Repair", Pipeline Rules of Thumb Handbook, 7th Edition, 2009, p. 74.	159
517	PG&E Exhibit 61, p. 3-48.	160
518	CPSD Exhibit 4, fn. 186: citing P7-7076.	160
519	These offices have always been located in San Ramon, and their name has changed from the Pipeline System Engineering of Gas System Design Department, to Applied Technology Services (ATS), to TES over time.	160
520	CPSD Exhibit 4, fn. 186: citing P7-7074 and P7-7075, both dated 1986.	160
521	CPSD Exhibit 4, fn. 189: citing PG&E Response to CPSD DR 19, Q 3. PG&E provided copies of all of the San Ramon records indexes. CPSD reviewed the indexes which span the entire life of PG&E, but found no index for reports produced in 1988.	160 and 161

522	CPSD Exhibit 2: P2-1286, S.P. 1605, p. 34.	161
523	CPSD Exhibit 2, fn. 138: citing P2-1286 (PG&E Standard Practice 1605). PG&E Standard Practice 1605 required keeping Weld Inspection Reports for the life of the facility.	162
524	CPSD Exhibit 16. The list of these alleged violations is drawn from the Revised Table of Violations from Dr. Paul Duller and Alison North Supplement to March 12th Report, PG&E Violations, submitted September 10, 2012	163
525	*Cedars-Sinai Medical Center v. Superior Court*, 18 Cal. 4th 1, 11.	164
526	PG&E Exhibit 61, p. 1-1, lines 20-21.	165
527	PG&E Response to CPSD DR 25, Q 2(i) Supp02Atch.17.	166
528	TURN Exhibit 4.	166
529	PG&E Exhibit 61, p. 4-6, lines 9-10.	166
530	PG&E Exhibit 61, p. 4-6, fn. 13.	166
531	Federal Register / Vol. 77, No. 88 / Monday, May 7, 2012, 26822.	166
532	Applying the Cedars-Sinai standard here, it is reasonable to infer that each missing record was necessary to establish MAOP for a pipeline.	166
533	CPSD Exhibit 6, p. 6-64, line 9; CPSD Exhibit 8, p. 36 of 72, lines 8-11.	167
534	CPSD Exhibit 8, fn. 145 and fn. 147: citing PG&E Response to CPSD DR 48, Q 1, Atch. 1. On February 15, 2012, PG&E provided CPSD information relating to a set of more than 132,000 job folders, of which 63.3% were from its Bayshore facility, only 30.3% were from Walnut Creek, and the remaining 6.4% were distributed across 42 other PG&E locations.	167
535	CPSD Exhibit 6, fn. 100 and 159: Citing PG&E Response to CPSD DR 51, Q 5, p. 2.	167
536	CPSD Exhibit 8, fn. 145 and 147; PG&E Response to CPSD DR 48, Q 1, Atch.1.	167
537	CPSD Exhibit 6, p. 6-64, line 9; CPSD Exhibit 8, p. 36 of 72, lines 8-11.	167
538	CPSD Exhibit 8, p. 39 of 72 lines 29-31 and p. 41 of 72 line 11.	168
539	PG&E Exhibit 61, p. 2-19, lines 13-15.	168
540	CPSD Exhibit 6, p. 6-53, line 24.	168
541	CPSD Exhibit 6, p. 6-58, lines 5-8.	168
542	CPSD Exhibit 6 fn. 151, 152, 153, 154, and 156; citing PG&E Response to CPSD DR 25, Q 1.	168
543	CPSD Exhibit 6, p. 6-71, lines 24-26.	168
544	CPSD Exhibit 6, fn. 151, 152, 153, 154, and 156; citing PG&E Response to CPSD DR 25, Q 1.	168
545	CPSD Exhibit 6, p. 6-58, lines 8-15.	168

546	PG&E Exhibit 61, p. 3-37, lines 11-13.	168
547	PG&E Exhibit 61, p. 3-37, lines 11-19. PG&E merely suggests here that these missing job files could be located in other lines of business than gas transmission, but PG&E provides no concrete showing that this has actually happened.	169
548	CPSD Exhibit 8, p. 39 of 72, lines 21-23.	169
549	PG&E Response to CPSD DR 85, p. 3.	169
550	PG&E Response to CPSD DR 85, p. 3.	169
551	CPSD Exhibit 6, p. 6-58, lines 9-11. For a list of additional facts showing that gaps in PG&E's job numbers means that PG&E is missing job files, see CPSD Exhibit 8, pp. 39-40.	169
552	PG&E Exhibit 61, p. 3-38, lines 24-25; For additional evidence showing that prior to August 2010, PG&E did not have a complete and comprehensive master index of pipeline related job files or of job folders associated with each job, see CPSD Exhibit 6, pp. 6-42, 6-56, 6-53, 6-41, 6-55, 6-69, 6-79 and 6-49; See also CPSD Exhibit 8, p. 38 of 72 lines 17-18; See also CPSD DR 25, A1, p. 10 (December 19, 2011).	169
553	PG&E Exhibit 61, p. 3-38, lines 28-32.	170
554	CPSD Exhibit 6, p. 6-61, lines 21-22; CPSD DR 25, Q1 (December 19, 2011).	170
555	CPSD Exhibit 6, p. 6-70 lines 12-14.	170
556	PG&E Exhibit 61, p. 3-38, line 18.	170
557	CPSD Exhibit 6, p. 6-40, lines 20-26 and 6-41 lines 1-2; CPSD DR 51 Q 5.	170
558	CPSD Exhibit 6, p. 6-68, Table 6-18.	170
559	PG&E Exhibit 61, p. 4-9, lines 19-22.	171
560	PG&E Exhibit 61, p. 3-59, lines 4-6.	171
561	PG&E Exhibit 61, p. 3-66, lines 26-28.	171
562	1/17/2013 Tr. 2129: 19 - 2130: 28.	171
563	1/17/2013 Tr. 2134: 5-10; 1/17/2013 Tr. 2136: 6-16; 1/17/2013 Tr. 2138: 28 - 2141: 8; 1/17/2013 Tr. 2141:15-2142: 19; 1/17/2013 Tr. 2142: 21 – 2143: 13; 1/17/2012 Tr. 2145: 14 – 2147: 25	171
564	CPSD Exhibit 8, fn. 23 and 221; citing PG&E Response to CPSD DR 67, Q 13.	171
565	1/17/2013 Tr. 2134; 13-28. PG&E admitted to an inaccurate GIS joint efficiency attribute record.	171
566	1/17/2012 Tr. 2145: 14 – 2147: 25. PG&E admitted that some GIS SMYS attribute records could be inaccurate.	171
567	1/17/2013 Tr. 2141:15-2142: 19. PG&E admitted that some GIS wall thickness attribute records could be inaccurate.	171
568	CPSD Exhibit 8, p. 9 of 72, lines 26-30: citing PG&E Data Response to CPSD DR 25, Q 2(i) Supp05 Atch. 1, p. 1.	172
569	CPSD Exhibit 8, p. 23 of 72, lines 7-9.	172

570	CPSD Exhibit 8, p. 23 of 72, lines 10-14.	172
571	PG&E Response to CPSD DR 24, Q 2, Atch. 1.	172
572	PG&E Response to CPSD DR 24, Q 2, Atch. 1.	172
573	CPSD Exhibit 8, Atch. 108, p. 14, line 12. The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O.	172
574	CPSD Exhibit 8, p. 48 of 72, lines 14-16.	173
575	CPSD Exhibit 8, fn. 23 and 221; citing PG&E Response to CPSD DR 67, Q 13.	173
576	CPSD Exhibit 8, p. 48 of 72, lines 11-14.	173
577	CPSD Exhibit 8, p. 13 of 72, lines 24-27; PG&E Response to DR 45, Q 7, p. 2.	173
578	For discussion of missing job files, see Violation A1, Subsection 3.a.iv. For discussion of incomplete job files, see Violation A1, Subsection 3.a.iii.	173
579	PG&E Exhibit 61, p. 3-66, lines 14-15.	173
580	PG&E Exhibit 61, p. 3-54, lines 3-4.	173
581	CPSD Exhibit 64; PG&E Response to Joint DR 01 Q2, Atch.01. "AUDITLOG_01182013 Redacted" provided by PG&E on January 18, 2013 per ALJ's instructions. This is seen by clicking on the heading of the column titled "Report_Date", and seeing that the first 154,315 entries occurred before September 10, 2010.	174
582	CPSD Exhibit 64; PG&E Response to Joint DR 01 Q2, Atch.01. "AUDITLOG_01182013 Redacted" provided by PG&E on January 18, 2013 per ALJ's instructions, "Report_Date" column.	174
583	D.12-12-030, p. 94.	174
584	For joint efficiency, See CPSD Exhibit 69, Route_Join Numbers 132 125.005, and 132_125.006; and 1/17/2013 Tr. 2125: 7-28; 1/17/2013 Tr. 2130: 13-28. For wall thickness, See CPSD Exhibit 69, Route-Join Number 1816-01 206.6; 1/17/2013 Tr. 2141: 15 to 2142: 9. For SMYS, See CPSD Exhibit 69, Route Join Number 0619-05_104.5 172A 78.2000; 2143: 20 to 2144: 10.	175
585	For joint efficiency, See CPSD Exhibit 69, Route_Join Number X6535 503 3006 476.2700; 1/17/2013 Tr.2135: 26 – 2136: 16. For wall thickness, See CPSD Exhibit 69, Route_Join Number 1881-01 206 103 22.2100; 1/17/2013 Tr. 2142: 21 - 2143: 13. For SMYS, See CPSD Exhibit 69, Route_Join Numbers 1304-01 100.5 021C 51.4100; 1304-01 100.6 021C 51.4100; and 1304-01_100 021C 51.4100; 1/17/2013 Tr. 2153: 20 to 2154:12.	175
586	01/17/2013 Tr. 2130: 13 to 2131: 3. See also CPSD Exhibit 69, Row 26669, Route_Join Number 132 125.005 0.0000; and Row 26670, Route_Join Number 132 125.005 0.0000.	175
587	See for example, 01/17/2013 Tr. 2143: 5-13.	175

588	CPSD Exhibit 64; PG&E Response to Joint DR 01 Q2, Atch.01. "AUDITLOG_01182013 Redacted" provided by PG&E on January 18, 2013 per ALJ's instructions. Within this document, several of the multiple examples of explicit pipeline replacements can be seen by looking at the "Review Comments" cell associated with Route_Join numbers 300A_240.6_ _0.0000; 300A_239.4_ _0.0000; and 1816-01_211.4_1816-01_3.4400.	175
589	1/17/2013 Tr. 2136: 25 – 2137: 10.	175
590	1/17/2013 Tr. 2158: 16 – 2159: 10.	176
591	1/17/2013 Tr. 2149: 1-3.	176
592	49 CFR §192.107(b)(2) provides that, "For pipe. . . whose specification or tensile properties are unknown", and not tensile tested, a SMYS value of 24,000 psi is to be used. Moreover, ASME Standard B31.1.8 §811.27(G) (1955) (p. 18) also required that, "When the manufacturer specific minimum yield strength, the tensile strength, or elongation for pipe is unknown and no physical tests are made, the minimum yield strength for purposes of design shall be taken at not more than 24000 PSI."	176
593	CPSD Exhibit 64; PG&E Response to Joint DR 01 Q2, Atch.01 "AUDITLOG_01182013 Redacted" provided by PG&E on January 18, 2013 per ALJ's instructions. This count can be determined by clicking on the column titled "Field_Name", and sorting that column from A to Z. This will group all of the changes to SMYS values together, enabling a count of all assumed values that exceed 24,000 psi.	176
594	See 49 CFR §192.107(b)(2).	176
595	D.09-08-029, p. 26.	176
596	PG&E Exhibit 61, p. 3-66, lines 26-29.	176
597	CPSD Exhibit 64; PG&E Response to CPSD-TURN Joint DR 01, Q 02, Supp. 01.	177
598	CPSD Exhibit 64; PG&E Response to CPSD-TURN Joint DR 01, Q 02, Supp. 01.	177
599	CPSD Exhibit 64; PG&E Response to CPSD-TURN Joint DR 01, Q 02, Supp. 01.	177
600	Rulemaking to Establish Rules For Enforcement of the Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates Adopted By the Commission (D.98-12-075), 84 CPUC2d 155, 1998 Cal. PUC LEXIS 1016, pp. 53-54.	177
601	Id. at p. 57.	177
602	PG&E Exhibit 61, p. 3-64, lines 8-11.	178
603	PG&E Exhibit 61, p. 3-61.	178
604	CPSD Exhibit 8, fn. 101, 102, and 103; citing PG&E Response to CPSD DR 69, Q 6.	178
605	10/5/2012 Tr. 1959: 14-25.	178
606	CPSD Exhibit 8, fn. 101, 102, and 103; citing PG&E Response to CPSD DR 69, Q 6.	178
607	CPSD Exhibit 6, p. 6-88, lines 17-19.	178

608	PG&E Response to CPSD DR 25, Q 2(i) Supp02Atch.02, p. 2.	178
609	PG&E Response to CPSD DR 25, Q 2(i) Supp02Atch.02, p. 3.	179
610	CPSD Exhibit 6, p. 6-89, Table 31.	179
611	CPSD Exhibit 6, p. 6-37, lines 27-28. CPSD Exhibit 8, fn. 283 and 285, citing PG&E's response to CPSD DR 66 Q 1. CPSD Exhibit 8. fn. 195, citing CPSD DR 67 Q 11. PG&E Responses to CPSD DR 7 Q 9; CPSD DR 4 Q 6; CPSD DR 34 Q 1.	179
612	CPSD Exhibit 2, fn. 106: citing P2-400, p. 92; also P2-1477, p. 566 (see fn. 620).	179
613	PG&E Exhibit 61, p. 2-23 lines 3-4.	179
614	CPSD Exhibit 8, p. 45 of 72, lines 26-28; PG&E Data Response to CPSD DR 67, Q 11.	179
615	PG&E Response to CPSD DR 7, Q 9, part C.	180
616	PG&E Response to CPSD DR 34, Q 1.	180
617	PG&E Exhibit 61, lines 3-4 and line 27.	180
618	PG&E Exhibit 64, p. 2-39.	180
619	PG&E Response to CPSD DR 7, Q 9.	180
620	CPSD Exhibit 3, p. 16, Adds DR 25 Q2g, Supp1, Atch. 1 to fn. 119: pp. 564-570.	180
621	Id., p, 4.	180
622	Id., p. 563.	180
623	PG&E Exhibit 61, p. 2-21, lines 24-26.	181
624	49 CFR §192.13(c).	181
625	CPSD Exhibit 8, p. 22 of 72, lines 16-17; PG&E Response to CPSD DR 24, Qs 1 and 2.	181
626	PG&E Exhibit 61, p. 3-33, lines 26-27.	181
627	PG&E Exhibit 61, p. 3-32, lines 1-2.	181
628	PG&E Exhibit 61, p. 3-28, lines 19-20.	182
629	PG&E Response to CPSD DR 25, Q 6.	182
630	See CPSD Exhibit 8, p. 22 of 72, lines 18-20; PG&E Response to CPSD DR 24, Q 2, Atch. 1.	182
631	PG&E Response to CPSD DR 70, Q 5; and PG&E Response to CPSD DR 70, Q 5 Atch. 1.	182
632	PG&E Response to CPSD DR 70, Q 5 Atch. 1.	182
633	PG&E Exhibit 61, p. 3-33, lines 26-27.	182
634	PG&E Exhibit 61, p. 4-1, lines 11-12.	182

635	PG&E Exhibit 61, p. 4-2, lines 6-8.	182
636	CPSD Exhibit 6, p. 6-81, lines 32-34.	182
637	CPSD Exhibit 6, p. 6-80, lines 20-22; PG&E Response to DR 4, Q 12, p. 4.	182
638	CPSD Exhibit 6, p. 6-81, Table 26 and lines 8-9; PG&E Response to DR 4, Q 12, p. 4.	182
639	CPSD Exhibit 6, p. 6-81, lines 21-22.	182
640	CPSD Exhibit 6, p. 7-95, lines 16-20.	182
641	TURN Exhibit 16, Appendix B, pp. 57, and 89.	184
642	PG&E Exhibit 61, p. 1-1, lines 21-22.	184
643	CPSD Exhibit 8, p. 15 of 72, lines 4-5; TURN Exhibit 16 ; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 8.	184
644	CPSD Exhibit 6, p. 6-26, lines 11-13.	184
645	CPSD Exhibit 6, p. 6-27, lines 25-26.	184
646	CPSD Exhibit 8, p. 14 of 72, lines 9-14; PG&E Response to CPSD DR 66, Q 2.	184
647	CPSD Exhibit 6, p. 6-29, lines 4-5; PG&E Response to CPSD DR 25, Q 2.	184
648	CPSD Exhibit 6, p. 6-29, lines 5-7, PG&E Response to CPSD DR 25, Q 2.	184
649	CPSD Exhibit 8, p. 15 of 72, lines 10-11; TURN Exhibit 16; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 8.	185
650	CPSD Exhibit 8, p. 15 of 72, lines 20-21; TURN Exhibit 16; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 8.	185
651	CPSD Exhibit 6, p. 6-30, lines 21-23, and lines 27 to 36; p. 6-31, lines 1-5; PG&E Response to CPSD DR 25, Q 02(i), (Preliminary January 18, 2012 draft of PG&E's Pricewaterhouse Cooper's Internal Report on Recordkeeping).	185
652	CPSD Exhibit 8, p. 15 of 72, lines 12-14; TURN Exhibit 16; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 8.	185
653	For example, PG&E Exhibit 61, p. 3-35, line 23 to p. 3-36, line 3 shows PG&E claiming that others in the industry are missing strength test pressure records as a defense for its own missing records.	185
654	PG&E Exhibit 61, p. 3-12, lines 22-23.	185
655	PG&E Exhibit 61, p. 4-5, lines 8-11.	186
656	PG&E Exhibit 47, §841.417.	186
657	PG&E Exhibit 47, §851.5.	186
658	I.11-02-016, "Pacific Gas and Electric Company's Response", June 20, 2011, p. 1-29, lines 15-17.	187

659	See PG&E Exhibit 62, p. MD-15, lines 14-15; p. MD-7, lines 16-21; See also PG&E Exhibit 61, p. 1-2, line 7; p. 0-1, line 17; p. 1-1, line 28; p. 1-1, line 31; and p. 1-3, line 7.	188
660	CPSD Exhibit 8, p. 30 of 72, lines 27-31.	188
661	CPSD Exhibit 8, p. 30 of 72, lines 23-26.	188
662	PG&E Exhibit 62, p. MD-8, lines 1-2.	189
663	PG&E Exhibit 62, p. MD-9, lines 10-13.	189
664	CPSD Exhibit 8, p. 29 of 72, lines 25-28.	189
665	PG&E Exhibit 61, p. 1-29 lines 6-8. PG&E asserts at this cite that PwC used GARP to assess PG&E's current records management practices, but the Cedars-Sinai principle supports CPSD's reasonable inference that an assessment of PG&E's current practices reflect PG&E's past records management deficiencies since its inception.	189
666	CPSD Exhibit 7, p. 2 of 5.	189
667	TURN Exhibit 16; PG&E's Supplemental Data Response to CPSD DR 25 Q 2(i), p. 8.	190
668	PG&E accepts that this final report and recommendations of PwC's assessment of Gas Operations and Information Management "were based on their observations about the state of the Gas Transmission Organizations records management practices at the time the assessment was conducted." (November 2011 to February 2012). See CPSD Exhibit 8, p. 14 of 72, lines 26-30. See also PG&E Response to CPSD DR 71 Q 7.	191
669	PG&E also has noted that it "intends to address the Records Management assessment recommendations it received earlier this year for its external records management consultant, PricewaterhouseCoopers (PwC). See PG&E Exhibit 61, pp. 1-19, lines 18-21.	191
670	PG&E Exhibit 61, p. 1-19, lines 6-8; CPSD Exhibit 8, p. 9 of 72, lines 10-12.	191
671	CPSD Exhibit 8, p. 16 of 72, lines 19-20.	191
672	PG&E Exhibit 61, p. 1-19, lines 3-5.	191
673	CPSD Exhibit 8, p. 4 of 72, lines 12-13 and p. 7 of 72 lines 18-19.	191
674	CPSD Exhibit 15 of 72, line 19; TURN Exhibit 16; PG&E's Supplemental Data Response to CPSD DR 25 Q 2(i), p. 8.	191
675	CPSD Exhibit 6, p. 6-26, lines 13-14.	191
676	CPSD Exhibit 8, p. 15 of 72, lines 10-11; TURN Exhibit 16; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 8.	193
677	For further discussion about lack of PG&E records management training, see CPSD Exhibit 8, p. 15 of 72, lines 12-14; See also TURN Exhibit 16; See also PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 8.	193
678	See Violation A1, Subsection 3.a.iii.	193
679	Violation B1.	194

680	Violation B2.	194
681	Violation B3.	194
682	Violation B4.	194
683	Violation B5.	194
684	CPSD Exhibit 6, p. 6-38, Table 6-5.	194
685	PG&E Exhibit 61, p. 2-23 line 12 to p. 2-24 line 15.	194
686	PG&E Exhibit 62, p. MD-41, lines 8-22 and generally §E.2.c.	196
687	PG&E Exhibit 62, Appendix D.	196
688	CPSD Exhibit 6: citing documents P2-195, P2-212, P2-225, P2-227 and P2-230 as the source of violations B1 through B5. None of these documents are referenced by PG&E in PG&E Exhibit 62, Appendix D. Moreover, PG&E Exhibit 62, Appendix E appears to show which P2 documents fit under different standard practices. Again, none of the P2 documents that CPSD references are addressed in Appendix E.	196
689	PG&E Exhibit 61, p. 2-24, lines 11-13, referencing P2-1149 to P2-1244.	196
690	CPSD Exhibit 6, fn. 113: citing PG&E response to CPSD DR 25, Q 2; CPSD Exhibit 8, fn. 268: citing PG&E response to CPSD DR 25, Q 8; CPSD Exhibit 8, fn. 167: PG&E response to CPSD DR 45, Q5; CPSD Exhibit 42: PG&E response to CPSD DR 23, Q 26; CPSD Exhibit 43: PG&E's Response to CPSD DR 46, Q4; and PG&E Responses to CPSD DR 4, Q 2 and 12; DR 18, Q 15; DR46, Q3.	196
691	PG&E Exhibit 62, p. MD-40, lines 9-16.	197
692	See TURN Exhibit 16; PG&E's Supplemental Data Response to CPSD DR 25A 2(i), p. 68, Figure 25.	197
693	For a more thorough discussion about the point that "everyone else is doing it", is not an excuse for violating the law, see Section III of this brief, specifically referencing *People v. Casa Blanca Convalescent Homes* (1984) 159 Cal.App.3d 509, 527-528; and also referencing Huntington *Memorial Hospital v. Superior Court* (2001) 131 Cal.App.4th 893, 911.	197
694	PG&E Exhibit 61, p. 2-24, lines 1-3.	197
695	CPSD Exhibit 6, Appendix 7, pp. 8-144 to 8-150 discusses multiple PG&E retention schedules, including documents P2-191 to P2-196; P2-199 to P2-201; P2-206; P2-208 to P2-215.	198
696	PG&E Exhibit 61, p. 2-24, lines 12-13.	198
697	This recommendation in no way excuses PG&E from missing its strength test pressure reports. By losing those, it apparently failed to follow its own requirement to retain those.	198
698	CPSD Exhibit 8, p. 3 of 5.	198
699	CPSD Exhibit 8, p. 3 of 5.	198

700	CPSD Exhibit 8, p. 3 of 5.	199
701	CPSD Exhibit 8, p. 3 of 5.	199
702	CPSD Exhibit 8, p. 3 of 5.	199
703	CPSD Exhibit 8, p. 3 of 5.	199
704	CPSD Exhibit 8, p. 3 of 5.	199
705	CPSD Exhibit 8, p. 3 of 5.	199
706	PG&E Exhibit 61, p. 4-9, line 1.	200
707	CPSD Exhibit 8, p. 4 of 5.	200
708	CPSD Exhibit 8, p. 4 of 5.	200
709	CPSD Exhibit 6, p. 6-38, Table 6-5.	200
710	PG&E Exhibit 61, p. 1-1, lines 20-21.	201
711	CPSD Exhibit 7, p. 9-170: citing P2-902 (10/1/1965); P2-906 (2/26/1968); P2-908 (9/10/1970); P2-909 (2/17/1972); P2-918 (1/25/1973)/ P2-933 (3/19/1984); P2-939 (8/6/1990); P2-940 (11/2/1992); P2-942 (2/28/1995); P2-945 (10/19/1998); P2-951 (12/9/2003). All of these documents are identified as strength test pressure record requirements.	201
712	TURN Exhibit 4.	201
713	D.61269, p. 4. The ASA code for gas transmission and distribution piping systems is also known as the American Society of Mechanical Engineers (ASME) standard B31.8, or §B31.1.8 in 1955; PG&E Response to CPSD DR 15, Q 6.	202
714	CPSD Exhibit 6, Appendix 9, p. 9-170. Note: As shown in this appendix, the ASME standards in 2010, changed the language to require "Permanent function-testing records of pipeline monitoring".	202
715	PG&E Response to CPSD DR 67, Q 8.	202
716	See TURN Exhibit 16, Appendix B p. 114. Here, PwC defines a Records Retention Schedule as a "Table that describes (1) length of time each document or record will be retained as an active record, (2) reason (legal, fiscal, historical) for its retention, and (3) final disposition (archival or destruction) of the record. Also called record control schedule, record disposition schedule, records schedule, or retention schedule."	202
717	CPSD Exhibit 25. PG&E stated, "PG&E accepts that its consultants' recommendations, as set forth in the PwC final report, were based on their observations about the state of the Gas Transmission Organization's records management practices at the time the assessment was conducted."	202
718	49 CFR §192.13(c) requires "Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part." PG&E's retention requirements are its own procedures, which it is required to follow under this regulation.	202
719	TURN Exhibit 16, Appendix B, p. 44; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 44.	202

720	TURN Exhibit 16, Appendix B, p. 42; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 42.	203
721	TURN Exhibit 16, Appendix B, p. 62; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 62.	203
722	TURN Exhibit 16, Appendix B, p. 43; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 43.	203
723	TURN Exhibit 16, Appendix B p. 44; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 44.	203
724	TURN Exhibit 16, Appendix B, p. 8; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 8.	203
725	TURN Exhibit 16, Appendix B, p. 64; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 64.	203
726	TURN Exhibit 16, Appendix B, pp. 64 and 65; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), pp. 64-65.	203
727	TURN Exhibit 16, Appendix B, p. 44; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 44.	203
728	TURN Exhibit 16, Appendix B, p. 63; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 63.	204
729	TURN Exhibit 16, Appendix B, p. 8; PG&E's Supplemental Data Response to CPSD DR 25 A 2(i), p. 8. Failure to manage information throughout its lifecycle is a failure to follow any retention policy that requires keeping records for the life of the facility.	204
730	CPSD Exhibit 6, p. 6-30, lines 28-32; PG&E Response to CPSD DR 25 Q 2(i) Supp 1, Atch. 9.	204
731	CPSD Exhibit 25, PG&E stated, "(PwC) summarized information and themes emerging as of specific dates in the course of the engagement. Accordingly, PG&E neither accepts nor rejects observations set forth in (PwC's) draft and preliminary documents".	204
732	CPSD Exhibit 6, p. 6-30, lines 28-32; PG&E Response to CPSD DR 25 Q 2(i) Supp 1, Atch. 9, p. 9.	204
733	CPSD Exhibit 6, p. 6-30, lines 28-32; PG&E Response to CPSD DR 25 Q 2(i) Supp 1, Atch. 9, p. 10.	204
734	CPSD Exhibit 6, p. 6-30, lines 28-32; PG&E Response to CPSD DR 25 Q 2(i) Supp 1, Atch. 9, p. 9.	204
735	PG&E Exhibit 61, p. 2-13 line 17; PG&E Exhibit 61, Exhibit 2-28.	205
736	PG&E Exhibit 61, p. 2-11, line 14.	205
737	PG&E Exhibit 61, p. 1-1, lines 20-21.	205
738	PG&E Exhibit 61, p. 2-23, lines 3-4.	205
739	PG&E Exhibit 61, pp. 2-1 to 2-2. See also PG&E Exhibit 61, Chapter 2A, pp. 2-3 to 2-24; Chapter 2B, p. 2-25; and PG&E Exhibit 62, pp. MD-6, and MD-38 to MD-55.	205
740	PG&E Exhibit 61, p. 2-22, lines 5-14.	205
741	PG&E Exhibit 61, p. 2-21, lines 17-18.	206
742	CPSD Exhibit 3, p. 16, fn. 119: citing DR 25 Q2g, Supp1, Atch 1 (P2-1477), Page 566, Points 10 and 12.	206
743	PG&E Exhibit 61, p. 2-21, fn. 20.	206

744	CPSD Exhibit 3, p. 16: For a full comparison of the elements required for a pipeline history file versus those of a job file see also Adds DR 25 Q2g, Supp1, Atch. 1 to fn. 119: pp. 565 (Pipeline History File Required Elements), PG&E Data Response to CPSD DR 42, Q 11, and DR 42, Q11, Att.1, (Job File Required Elements are shown in point 10).	206
745	PG&E Exhibit 61, p. 2-11, line 16.	206
746	PG&E Exhibit 61, p. 2-3, lines 4-5, and 8-9.	206
747	PG&E Exhibit 61, p. 2-11, lines 14-15.	207
748	PG&E Exhibit 61, p. 2-12, lines 10-12.	207
749	PG&E Exhibit 61, p. 2-13, lines 11-12, referencing PG&E Exhibit 2-28.	207
750	CPSD Exhibit 8, p. 34 of 72, lines 3-4; PG&E Response to CPSD DR 70, Q 13.	207
751	PG&E Exhibit 61, p. 2-13, lines 11-22.	207
752	CPSD Exhibit 8, p. 33 of 72, lines 28-29, and p. 34 of 72 lines 1-2.	207
753	PG&E Exhibit 62, MD-68, lines 10-13.	207
754	CPSD Exhibit 7, p. 4 of 5; Exhibit 8, pp. 6-37 and 6-37..	208
755	CPSD Exhibit 6, p. 6-38, Table 6-5.	208
756	PG&E Response to CPSD DR 34, Q 2, Atch. 1, p. 1.	209
757	CPSD Exhibit 6, fn. 115: citing PG&E Response to CPSD DR 44, Q 1, Atch. 32.	209
758	CPSD Exhibit 6, p. 6-50, lines 3-14; PG&E Response to CPSD DR 44, Q 1, Atch. 32, p. 1.	209
759	CPSD Exhibit 6, p. 6-50, lines 26-28; PG&E Response to CPSD DR 44, Q 1, Atch. 32, p. 2.	209
760	CPSD Exhibit 6, fn. 115: citing PG&E Response to CPSD DR 44, Q 1, Atch. 32, p. 1.	209
761	CPSD Exhibit 6, fn. 115: citing PG&E Response to CPSD DR 44, Q 1, Atch. 32, p. 2.	209
762	CPSD Exhibit 8, Atch. 108, p. 11. (108_Redacted.pdf).	210
763	PG&E Response to CPSD DR 5, Q 11, Atch. 4, p. 14.	210
764	CPSD Exhibit 8, Atch. 108, p. 11. (108_Redacted.pdf).	210
765	PG&E Response to CPSD DR 5, Q 11, Atch. 3, p. 8.	210
766	PG&E Exhibit 61, p. 3-52, line 13.	211
767	PG&E Exhibit 61, p. 3-52, lines 14 through 19.	211
768	PG&E Exhibit 61, p. 4-1, lines 11-12.	211
769	PG&E Exhibit 61, p. 4-2, lines 6-8.	211
770	PG&E Exhibit 61, p. 3-52, lines 1-4.	211

771	PG&E Response to CPSD DR 52, Q 1 contains document CPUC_100, Q04, Atch.04, p. 5 which originated from a source other than CPSD.	212
772	Many examples of the problems PG&E had with accurately identifying appropriate pipelines to replace can be see under Violation 25 of this brief.	212
773	For a more thorough discussion of PG&E's discarding of its pipeline history files, see Violation 17, and Violation A1,(3)(a)(xiv).	212
774	CPSD could assert that the duration of this violation begins in 1984, when PG&E first learned from the Bechtel report that BBCR joints appear in lines from before 1950, but CPSD asserts 1995 as a beginning date that reasonably shows that PG&E's 1995 GPRP ignored the information from the 1984 Bechtel Report ("Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O).	212
775	CPSD Exhibit 7, p. 4 of 5.	213
776	CPSD Exhibit 6, p. 6-91, citing Yokel, F.Y. and Mathey, R.G. (1992) Earthquake Resistant Construction of Gas and Liquid Fuel Pipeline Systems Serving, or Regulated by, the Federal Government. Federal Emergency Management Agency, FEMA- 233, July 1992.	214
777	CPSD Exhibit 6, p. 6-91, citing Yokel, F.Y. and Mathey, R.G. (1992) Earthquake Resistant Construction of Gas and Liquid Fuel Pipeline Systems Serving, or Regulated by, the Federal Government. Federal Emergency Management Agency, FEMA- 233, July 1992.	214
778	CPSD Exhibit 8, p. 23 of 72, lines 7-9.	215
779	09/19/2012 Tr. 1868: 15-23.	215
780	PG&E Response to CPSD DR 24, Q 2, Atch. 1.	215
781	PG&E Response to CPSD DR 24, Q 2, Atch. 1.	215
782	PG&E Response to CPSD DR 10, Q 5, Atch. 6.	215
783	PG&E Exhibit 61, p. 3-32, lines 1-2.	215
784	PG&E Exhibit 61, p. 3-28, lines 20-22.	215
785	CPSD Exhibit 8, Atch. 108, pp. 7-8, "The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O.	216
786	PG&E Exhibit 61, p. 3-66, lines 26-27.	216
787	CPSD Exhibit 8, fn. 23 and 221; citing PG&E Response to CPSD DR 67, Q 13.	216
788	PG&E Exhibit 61, p. 4-1, lines 11-12.	216
789	PG&E Exhibit 61, p. 3-51, lines 20-24.	216
790	CPSD Exhibit 6, p. 6-91, citing Yokel, F.Y. and Mathey, R.G. (1992) Earthquake Resistant Construction of Gas and Liquid Fuel Pipeline Systems Serving, or Regulated by, the Federal Government. Federal Emergency Management	216

	Agency, FEMA- 233, July 1992.	
791	PG&E Exhibit 61, p. 3-49, lines 14-16.	217
792	CPSD Exhibit 6, p. 6-92, lines 13-15.	217
793	CPSD Exhibit 8, p. 22 of 72, lines 16-25.	217
794	PG&E Exhibit 61, p. 3-51, lines 11-13.	217
795	CPSD Exhibit 8, Atch. 108. The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O.	218
796	PG&E Exhibit 61, p. 3-60, lines 23-26.	220
797	PG&E Exhibit 61, p. 3-61.	220
798	PG&E Exhibit 61, p. 3-61, lines 25-26.	220
799	CPSD Exhibit 8, fn. 101, fn. 102, and fn.103: citing PG&E Response to CPSD DR 69, Q 6.	220
800	CPSD Exhibit 8, fn. 101, fn. 102, and fn. 103: citing PG&E Response to CPSD DR 69, Q 6.	220
801	CPSD Exhibit 2, p. 19, lines 16-24.	220
802	CPSD Exhibit 2, p. 26, lines 10-18.	221
803	For more discussion about PG&E's integrity management problems resulting from bad leak information, see Violation 25.	221
804	CPSD Exhibit 8, fn. 101, 102, and 103; citing PG&E Response to CPSD DR 69, Q 6.	221
805	PG&E Response to CPSD DR 25, Q 2(i) Supp 02Atch.17.	221
806	PG&E Response to CPSD DR 25, Q 2(i) Supp 02Atch.17.	221
807	PG&E Response to CPSD DR 25, Q 2(i) Supp 02Atch.17.	221
808	PG&E Response to CPSD DR 25, Q 2(i) Supp 02Atch.17.	221
809	PG&E Response to CPSD DR 25, Q 2(i) Supp 02Atch.17, p. 2.	221
810	PG&E Response to CPSD DR 25, Q 2(i) Supp 02Atch.17, p. 2.	221
811	CPSD Exhibit 55, p. 8. The Bechtel report "Engineering Consulting Services for Pacific Gas and Electric Company", dated January 1984, Job 16253, Revision O.	222
812	PG&E Response to CPSD DR 25, Q 2(i) Supp 02Atch.17, p. 2.	222
813	PG&E Response to CPSD DR 25, Q 2(i) Supp 02Atch.17, p. 3.	222
814	CPSD Exhibit 8, p. 24, lines 28 to 30.	223
815	CPSD Exhibit 8, p. 24, line 28 to 25 line 3.	223

816	CPSD Exhibit 7, p. 5 of 5 had noted this violation began in 1955, but CPSD modifies the beginning date of this violation in PG&E's favor now.	223
817	CPSD Exhibit 6, p. 4-19, lines 14-15.	223
818	CPSD Exhibit 8, p. 16 of 72, lines 19-20.	223
819	CPSD Exhibit 6, p. 6-26, lines 13-14.	224