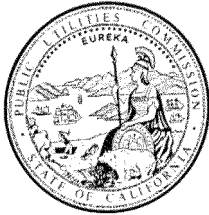


Docket: : I.11-02-016
Exhibit Number : 3
Commissioner : M Florio
Admin. Law Judge : Yip-Kikugawa
CPSD Project Mgr. : Robert Cagen
:



**CONSUMER PROTECTION AND SAFETY DIVISION
CALIFORNIA PUBLIC UTILITIES COMMISSION**

**SUPPLEMENTAL
to March 16th Report, Exhibit 1.
PG&E Violations**

**REPORT AND TESTIMONY
OF MARGARET
FELTS**

I.11-02-016

San Francisco, California
March 30, 2012

1 There are three purposes in filing this supplemental testimony. First, this
2 testimony addresses five recordkeeping topics that were previously omitted due to late-
3 received responses from PG&E. These topics involve the preservation of video records
4 from September 9, 2010; contradictory data responses regarding video records; the
5 preservation of audio records from September 9, 2010; a data response that does not
6 identify all of the people at Milpitas terminal on September 9, 2010; and a missing
7 service agreement that controls access to audio recordings.

8 Second, as discussed at the prehearing conference on March 20, 2012, this
9 supplemental testimony includes a new Table 1 that lists violations that result from
10 identified sections of the March 16 Felts testimony.

11 Third, during a final revision to the March 12 testimony, some exhibits were
12 inadvertently omitted and, in a few instances, minor wording was omitted. Table 2
13 identifies the footnotes that reference these additional exhibits and the page and line
14 numbers of minor wording changes. The new exhibits are identified in column 3 of Table
15 2 and are provided separately.

16 **I. ADDITIONAL RECORDKEEPING TOPICS**

17 **A. Video Tapes of the Brentwood Control Room and** 18 **PG&E's Failure to Check Camera 6**

19 On September 9, 2010, two PG&E control rooms were available to provide
20 command and control to PG&E's system and for the San Bruno situation that developed
21 on that day. The San Francisco control room had primary responsibility for the control
22 functions that day. The Brentwood control room was the backup control room for PG&E
23 on September 9. At the time of the San Bruno explosion, personnel were in the process
24 of moving primary control of the gas transmission system from the San Francisco Control
25 Room to the Brentwood Control Room. PG&E has said that this transition was due to a
26 policy of operating the backup facility in Brentwood quarterly. The first shift for the
27 quarterly operation at Brentwood began on the evening of September 9, 2010. For a
28 period of several hours that evening, there were PG&E personnel at both control rooms.

1 Control room activities and actions on September 9, 2010 are important subjects
2 for the recordkeeping investigation. Records problems with the control room on that date
3 include clearances, (Felts report, pp. 6 and 7) Supervisory Control and Data Acquisition
4 (SCADA) used in the control rooms, (id. at 11 and 12) and PG&E’s Emergency
5 Response Plans available to control room operators (id. at 12-14).

6 During a site visit to the Brentwood Control Room, PG&E told the visiting group,
7 including me, that it had video surveillance cameras in both the Brentwood and San
8 Francisco control rooms and pointed out the camera in the Brentwood Control Room. On
9 October 10, 2011, PG&E responded to a data request that asked for copies of the videos.
10 PG&E said it has no camera in its San Francisco Control Room. Regarding the
11 Brentwood facility, PG&E said “Video cameras are installed at the Brentwood facility to
12 monitor security system activation events. Video is recorded and retained on a digital
13 video recorder until it is automatically overwritten when the disk array becomes full,
14 which occurs after approximately 60 days. The video recording from the Brentwood
15 facility for September 9 and 10, 2010, was overwritten in this manner.”¹

16 In our site visit to PG&E’s security center, investigators viewed the live feed from
17 the camera at the Brentwood Control Room, which is monitored 24 hours per day. On
18 January 18, 2012 PG&E was asked to provide the name and job title of each PG&E
19 employee or agent who had visually seen, between September 9, 2010 and November 10,
20 2010, any of the September 8-10, 2010 video tapes for either the Brentwood or San
21 Francisco control room. On February 6, 2012, PG&E responded that “[t]here is no video
22 tape system at the San Francisco Gas Control room. PG&E does not believe that any
23 PG&E employee or agent reviewed, between September 9, 2010 and November 10, 2010,
24 what is on the security video tape from the Brentwood alternate gas control facility.”²

25 On March 9, 2012 PG&E provided a revised response to the data request, stating:

¹ Response to OII DR 8 Q 16 (Data Responses that support this supplemental testimony will soon be available on the Commission’s website in redacted form.)

² Response to OII DR 43 Q 5; also, CPSD DR_CPUC_210

1 “In certain past communications with the Commission,
2 including responses to three data requests, PG&E stated that
3 video from a security camera in the Brentwood Terminal’s
4 Alternate Gas Control (“ACG”) recorded on September 9,
5 2010 was automatically overwritten about 60 days later.

6 PG&E based these statements on the mistaken belief that the
7 security camera inside the AGC (“Camera 6”) and the related
8 digital video recorder (SVR “”) had been configured in the
9 same manner as other PG&E security camera systems.

10 PG&E has recently learned, however, that the vendor who
11 installed the Brentwood Terminal camera system did not
12 configure the system properly. As a result, Camera 6 could
13 provide a live feed but its video was not recorded onto the
14 DVR. No video from Camera 6 was recorded on September
15 9. Thus no video was overwritten...

16 In March 2010, as it prepared to move its primary gas control
17 center operations from the AGC to San Francisco, PG&E
18 contracted with Acme to install a security camera in the AGC
19 because the AGC would no longer be manned full time. As
20 of March 2010, there were already five outdoor cameras at
21 the Brentwood Terminal. PG&E installed Camera 6 for the
22 sole purpose of monitoring the AGC for unauthorized access.
23 In May 2010, Acme installed the camera. In June 2010,
24 Acme installed a new DVR in the Brentwood Terminal to
25 replace the existing DVR, which was installed in 2004 and
26 was near the end of its useful life. The DVR was configured
27 to serve all six security cameras...

28 Additionally, the average length of time that PG&E security
29 camera systems retain video is 60 days. Hence, if Camera 6
30 had in fact been recording the normal operation would have
31 written over any recording within the period of time of
32 retention for that camera. The retention period for specific
33 security camera systems which were recording would vary
34 based on such factors as storage capacity and the number of
35 cameras, however. PG&E recently examined the video
36 recorded from the five outdoor cameras, which were
37 configured properly, and found video from approximately
38 110 days before the examination was made. With respect to

1 Camera 6, an inspection has been made and has confirmed
2 that no video was recorded onto the DVR.”³

3 As shown here, a series of inferences based upon PG&E’s data responses leads to
4 the conclusion that PG&E violated records preservation requirements.

5 First, recordings on Camera 6 would have been part of an ongoing recording loop.
6 This inference can be made because the other five cameras at Brentwood were found to
7 contain 110 days of video only before the time they were examined.

8 Second, the video recording loop from Camera 6 would last between 60 days (the
9 average length of time PG&E says its security camera systems retain video) and 110 days
10 (the length of time the five other cameras were found to have video before they were
11 examined).

12 Third, the video recording loop from Camera 6 would have lasted at least 60 days
13 after the San Bruno tragedy happened on September 9, 2010, which means it would have
14 lasted until November 8, 2010.

15 Fourth, the Commission’s Executive Director ordered PG&E to preserve its
16 records on September 13, 2010. On September 23, 2010, the Commission issued a
17 Resolution No. L-403 to ensure the safety of the public in California in connection with
18 the operation of PG&E’s natural gas transmission system. In particular, Mandate 7 of
19 this resolution required PG&E to “Preserve all records related to the incident, including
20 work at the Milpitas Terminal during the month of September 2010.” Therefore, PG&E
21 had at least 56 days to comply with the Executive Director’s order, and 46 days to
22 comply with the Commission issued Resolution No. L-403 by preserving the recorded
23 video in Camera 6.

24 Fifth, on September 11, 2010, in recognition of PG&E’s fiduciary duty to preserve
25 records, PG&E’s own General Counsel issued instructions to preserve and retain all
26 paper and electronic documents, and to prevent its DVR from automatically deleting.⁴

³ Amended Response to OII DR 8 Q 16, Rev 1

⁴ Excerpts from PG&E’s General Counsel’s Instructions are included as Appendix A.

1 Hence, PG&E had 58 days to follow its General Counsel’s preservation instructions by
2 preserving the recorded video in Camera 6.

3 Sixth, if PG&E had checked the video from Camera 6 any time between
4 September 9, 2010 and October 10, 2011, the date of PG&E’s data response indicating
5 the video was overwritten within 60 days,⁵ then it would have known whether or not the
6 statement in that data response was true. Instead, PG&E took until March 9, 2012 to
7 indicate it had made a mistake about the recorded video of Camera 6. This last point
8 indicates that PG&E did not even check the Camera 6 digital video recorder to see if it
9 had been recording before personnel thought it would automatically delete. PG&E’s
10 failure to check shows it also failed to try to preserve the Camera 6 video that it had
11 thought, up until October 10, 2011, was being recorded and deleted after 60 days. This
12 lack of effort indicates that PG&E did not follow the Commission’s Executive Director’s
13 preservation order, the Commission’s Resolution No. L-403, or its own General
14 Counsel’s preservation instructions.

15 **B. Contradictory Data Responses**

16 PG&E’s data response from October 10, 2011 to the Commission that the
17 Brentwood facility video recording for September 9 and 10 was overwritten after 60 days
18 is contradicted by PG&E’s own later data response from March 9, 2012 that no video was
19 recorded onto its DVR. Because PG&E’s October 10, 2011 and the March 9, 2012 data
20 responses are contradictory, one or both of them must be false.

21 PG&E’s data response from March 9, 2012 also says that recent examination
22 showed that recorded video on the five other cameras in Brentwood lasted approximately
23 110 days. It is likely that Camera 6 also would have had recorded video lasting for 110
24 days, just as the other five cameras had. This suggests that PG&E never checked to see if
25 video from Camera 6 was recorded and deleted after 60 days, in spite of its October 10,
26 2011 data response.

27 Further investigation into the matter of the missing video records is recommended.

⁵ Response to OII DR 8 Q 1

1 **C. Audio Recordings of the San Francisco Control Room**

2 During the investigation, PG&E purported to produce copies of audio files and
3 transcripts for calls recorded in the San Francisco Control Room for September 9 and 10,
4 2010. On September 21, 2011, PG&E was asked to provide unedited, unredacted copies
5 of the audio files. PG&E responded on October 10, 2011, that it had provided complete,
6 unedited recordings.⁶ PG&E also stated that it had 16 phone lines into the San Francisco
7 Control Room, but only provided recordings for 5 consoles.⁷ On January 18, 2012, a list
8 of 50 files (in .wav format) that appeared to be missing from the September 9, 2010 audio
9 recordings was identified to PG&E and an explanation was requested. PG&E responded
10 on February 6, 2012:

11 “There are no missing Gas Control room recordings. PG&E
12 provided all the recordings in its responses to CPUC_003-
13 Q02, CPUC_Q03-002-Supp01, and CPUC_003-Q02-Supp02.
14 The Verint call loggers that record the telephone calls in to
15 and out of the San Francisco Gas Control room also record
16 the phone calls of a handful of other departments at PG&E
17 (electric energy trading, gas marketing, gas procurement, and
18 grid control). The Verint call logger assigns every call a
19 sequential identification number. The gaps in the numbering
20 sequence of the Gas Control room recordings result from
21 phone calls that were recorded by the Verint system for the
22 other groups that utilize the call loggers. No Gas Control
23 room recordings were omitted or deleted.”⁸

24 PG&E failed to explain why the missing call records were after business hours and
25 did not produce evidence of the other types of calls recorded on the evening of September
26 9, 2010. Further, in the same data request, PG&E was asked to identify employees or
27 agents who either audibly or in written form reviewed the audio records. PG&E identified
28 8 people in its February 6, 2012 response.⁹ However, according to the audio files for the

⁶ Response to DR 8 Q 16

⁷ Response to DR 8 Q9 and DR 8 Q9_attach_1, *Note:* Investigators did not follow up on this apparent discrepancy and recommends that this issue be included in any further investigation.

⁸ Response to DR 43 Q 1

⁹ Response to DR 43 Q 4

1 evening of September 9, 2010, at least one person who is not on PG&E's list was
2 reviewing the audio records after 10 PM. The audio files also indicate this person was
3 present in the San Francisco Control Room when reviewing the audio records.

4 In addition to audio files from its San Francisco Control Room from September 9
5 and 10, 2010, PG&E also purported to produce audio files with recordings of its
6 Brentwood Control Room from those same dates, leaving investigators with two sets of
7 audio file recordings from PG&E's Control Rooms. From these two sets of audio files,
8 three transcripts were created. The first two transcripts are of the San Francisco audio
9 file recordings, and the third is of Brentwood. Each of these three transcripts is provided
10 as exhibits accompanying this supplemental report.

11 Of the two transcripts from San Francisco, the first was prepared by an
12 independent transcriber at the request of the investigators. This exhibit has the file name
13 "SF 9 9 2010 5 45 34 PM-11 57 23 independent" (independent transcript). The second of
14 the San Francisco transcripts was provided by PG&E, and has the file name
15 "SF_9.9.2010_2.05.43_PM_11.57.23_PM_20110113-PG&E" (PG&E transcript).

16 Although the PG&E transcript and independent transcript are both made from the
17 same audio file recordings, they differ from each other in several ways. All of these
18 differences are shown in the independent transcript. First, areas that are highlighted in
19 yellow will show substantive differences between the independent transcript and PG&E
20 transcript. Second, some self-explanatory red comments next to the text in the
21 independent transcript identify specific differences with the PG&E transcript. Third,
22 there are some single line red comments within the transcripts, which identify where
23 audio files are missing. These comments state that one or more numbered files were
24 skipped and that the recordings proceed with the next identified audio file.

25 The third transcript, PG&E's transcript of the Brentwood Control Room call
26 recordings, is provided as exhibit file name
27 "Brentwood_9.9.2010_11.27.59_AM_7.19.03 PM_20110811". As some calls were
28 made between the Brentwood and San Francisco Control Rooms on September 9 and 10,

1 2010, a comparison of these transcripts could show whether there are inconsistencies
2 between the two transcripts for those particular phone calls.

3 **D. PG&E Did Not Identify All of the People in Milpitas**
4 **Handling the Pressure Problem on September 9, 2010**

5 In spite of several data requests, PG&E failed to identify all of the people present
6 at the Milpitas terminal who were handling the pressure problem on September 9, 2010.
7 First, Data Request 8, Question 8(d) asked PG&E to identify all personnel who had
8 access to Geographic Information Systems (GIS) and Supervisory Control and Data
9 Acquisition (SCADA) diagrams at the Milpitas Terminal on September 9, 2010. In
10 response, PG&E identified only three personnel who had such access.¹⁰

11 Second, Data Request 30, Question 2 asked PG&E to “Provide the names of the
12 maintenance personnel and the maintenance supervisor who were headquartered at the
13 Milpitas Terminal on September 2010. Specify the hours each person identified was
14 present at the Milpitas Terminal on September 9, 2010 and summarize the work that
15 person performed during that time.” In response, PG&E identified three employees who
16 were present on the evening of September 9, 2010 (after 5 PM when problems at the
17 Terminal arose),¹¹ but omitted the Supervisor for the Milpitas Terminal. According to the
18 SF Control Room transcript, the Supervisor was present after 5 PM at the Milpitas
19 Terminal.¹²

20 **E. PG&E’s Missing Service Agreement Controlling Access to**
21 **Audio Recordings**

22 One of PG&E’s data responses included the Verint Service Level Agreement
23 (Agreement), dated July 26, 2011, for call logging services.¹³ Appendix C to the
24 Agreement explains that it updates an earlier agreement from May 12, 2011. Appendix C

¹⁰ Response to DR 8, Question 8(d) was submitted by PG&E on October 10, 2011.

¹¹ Response to DR 30, Q2 was submitted by PG&E on December 17, 2011.

¹² SF_9.9.2010_2.05.43_PM_11.57.23 PM_20110113

¹³ Response to DR 1 Q 2, Atch

1 identifies several additions made to the May 12 agreement regarding recorder access,
2 including the following section:

3

4 “7.1.4 Recorder Access

5 Access to the recordings is controlled by access to the viewer
6 application which allows users to listen to the recordings.

7 Access to the Viewer is maintained by Limited Access

8 Security Groups and controlled by the LOB Department

9 Managers. A department that wants to allow access will call

10 the IT Service Desk and ask for an Active Directory request,

11 that specific users be added to the group for that specific

12 Viewer. They will also put in a request to remove this access

13 when they desire the user’s access to stop.”¹⁴

14

15 Section 7.1.4 suggests an increase in control over access to the recordings. To
16 investigate whether PG&E changed control over access to recordings after September 9,
17 2010, PG&E was asked to produce a copy of the agreement as it existed on September 9,
18 2010. PG&E responded on January 16, 2012 that it “is still searching for the prior Service
19 Level Agreement in effect as of 9/9/2010 and will provide this document if it is
20 located.”¹⁵ To date, it has not produced this version of the agreement. PG&E’s failure to
21 locate and provide this agreement violates instructions from PG&E’s own General
22 Counsel to preserve all records.¹⁶ Therefore, this question falls within the scoping ruling
23 of this proceeding, which asks, “Did PG&E’s recordkeeping practices violate other
24 recordkeeping-related rules or requirements regarding its procedures, training, and
25 supervision?”¹⁷

26 Investigators could not reach a conclusion regarding these audio tape records due
27 to lack of time. The summary of PG&E’s responses is provided in this supplement as a
28 matter of record and further investigation into this matter is recommended.

¹⁴ Response to DR 1 Q 2, Atch

¹⁵ Response to DR 39 Q 10

¹⁶ See Supplemental Appendix A: Excerpts from PG&E General Counsel’s Instructions for more information.

¹⁷ ASSIGNED COMMISSIONER’S SCOPING MEMO AND RULING, 11-21-11 Page 2, Question 4.

1 **Table 1 - Violations related to the San Bruno Incident**

2 Records Violations relating to Line 132, Segment 180, San Bruno Incident

3 1. No records for salvaged pipe installed into Segment 180¹⁸pre 1956-2010
4 Violation of Public Utilities Code Section 451¹⁹1951-2010
5 Potential Violation of California Public Utilities Act
6 Article II Sec. 13(b)²⁰ pre 1951
7 2. Failure to create/retain construction records for 1956 project
8 GM 136471²¹ 1956-2010
9 Violation of Public Utilities Code Section 451 1956-2010
10 3. Failure to retain pressure test records for L-132, Segment 180²².....1955-2010
11 Violation of Public Utilities Code Section 451 1961-2010
12 Violation of ASME Standards Section B31.8²³1955-2010
13 Violation of General Orders 112, 112A, and 112B Section 107²⁴ 1961-1970
14 4. Lost underlying records to support MAOP of 390 on Segment 180²⁵... 1977-2010
15 Violation of Public Utilities Code Section 4511977-2010
16 Violation of ASME Standards Section B31.8 1977-2010
17 5. Failure to Follow Procedures to Create Clearance Record²⁶..... 2010

¹⁸ Felts Testimony, Section 2.1

¹⁹ Since 1951 Cal. Pub. Util. 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.”

²⁰ From 1911 to 1951, Cal. Pub. Util. 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 Cal. Pub. Util. 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.

²¹ Felts Testimony, Section 2.1

²² Felts Testimony, Section 3.2

²³ To see the rules underlying ASME standard violations in Table 1, please refer to Felts Testimony (Exhibit 1), Appendix 8.

²⁴ Section 107 of each of these versions of General Order 112 required compliance with ASME standard B31.8 that was current at the time.

²⁵ Felts Testimony, Section 2.2 (including Appendix 1)

²⁶ Felts Testimony , Section 2.3

1		Violation of Public Utilities Code Section 451	2010
2	6.	Out-of-date Operations and Maintenance instructions at	
3		Milpitas Terminal ²⁷	1991-2010
4		Violation of Public Utilities Code Section 451	1991-2010
5	7.	Out-of-date Drawing and Diagrams of the Milpitas Terminal ²⁸	2008-2010
6		Violation of Public Utilities Code Section 451	2008-2010
7		Violation of PG&E internal policies requiring retention of eng. records ²⁹	2008-2010
8	8.	No Back-up Software at the Milpitas Terminal ³⁰	1991-2010
9		Violation of Public Utilities Code Section 451	1991-2010
10	9.	Unsafe design of Supervisory Control And Data	
11		Acquisition System ³¹	2008-2010
12		Violation of Public Utilities Code Section 451	2008-2010
13	10.	Emergency Response Plans too Difficult to Use ³²	Apr 2010-Sept 2010
14		Violation of Public Utilities Code Section 451	Apr 2010-Sept 2010
15	11.	Operated L-132 in excess of 390 MAOP (1 day each year) ³³	2003-2010
16		Violation of Public Utilities Code Section 451	2003-2010
17	12.	Failure to Attempt to Preserve Video Recordings that PG&E	
18		Believed Was on Brentwood Camera 6	2010-2012
19		Violation of Preservation Order from Commission	
20		Executive Director	2010-2012
21		Violation of Commission Resolution Number L-403	2010-2012
22	13.	PG&E's Contradictory Data Responses Regarding Recorded Brentwood Camera 6	
23		Video	2011 and 2012

²⁷ Felts Testimony, Section 2.4

²⁸ Felts Testimony, Section 2.5

²⁹ Felts Testimony, Appendix 8 (engineering records row). 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. These policies apply from 1964 to 2010.

³⁰ Felts Testimony, Section 2.6

³¹ Felts Testimony, Section 2.7

³² Felts Testimony, Section 2.8

³³ Felts Testimony, Section 2.2 and Attachment 1 plus Attachment 1 Exhibits

1 Violation of Commission Rules of Practice and Procedure Rule 1.1 2011

2 14. PG&E’s Data Responses Did Not Identify All of the People in Milpitas Handling

3 the Pressure Problem on September 9, 2010....October 10 and December 17, 2011

4 Violations of Commission Rules of Practice and

5 Procedure Rule 1.1.....October 10 and December 17, 2011

6 15. Loss of the 2010 Agreement Controlling Access to Audio Recordings 2010-2012

7 Violation of Public Utilities Code Section 4512010-2012

8 Violation of Preservation Order from Commission Executive Director³⁴2010-2012

9 Violation of Commission Resolution Number L-403³⁵2010-2012

10

11 General Records Violations for all Transmission including 132

12 16. Job Files Missing and Disorganized³⁶.....1987-2010

13 Violation of Public Utilities Code Section 4511987-2010

14 Violation of ASME Standards Section B31.81987-2010

15 Violation of PG&E internal policies requiring retention of

16 eng. Records1987-2010

17 17. Pipeline History Records Missing³⁷1987-2010

18 Violation of Public Utilities Code Section 4511987-2010

19 Violation of ASME Standards Section B31.81987-2010

20 Violation of PG&E internal policies requiring retention

21 of eng. records1987-2010

22 18. Design and Pressure Test Records Missing³⁸.....1930-2011

23 Violation of Public Utilities Code Section 4511951-2010

24 Violation of California Public Utilities Act Article II Section 13(b).... 1930-1951

25 Violation of ASME Standards Section B31.81955-2010

26 Violation of General Orders 112, 112A, and 112B Section 107..... 1961-1970

27 Violation of PG&E internal policies requiring retention of eng. records1964-2010

³⁴ Issued September 13, 2010.

³⁵ Issued September 23, 2010.

³⁶ Felts Testimony, Section 4.2

³⁷ Felts Testimony, Section 4.1.1 – 4.1.2

³⁸ Felts Testimony, Section 4.3

1	19.	Weld Maps and Weld Inspection Records Missing or Incomplete ³⁹	1930-2011
2		Violation of 49 CFR 192.241 and 192.243 ⁴⁰	1970-2010
3		Violation of Public Utilities Code Section 451	1951-2010
4		Violation of California Public Utilities Act Article II Section 13(b)....	1930-1951
5		Violation of ASME Standards Section B31.8	1955-2010
6		Violation of General Orders 112, 112A, and 112B Section 107.....	1961-1970
7	20.	Operating Pressure Records Missing, Incomplete or Inaccessible ⁴¹	1930-2010
8		Violation of Public Utilities Code Section 451	1951-2010
9		Violation of California Public Utilities Act Article II Section 13(b)....	1930-1951
10		Violation of ASME Standards Section B31.8	1955-2010
11		Violation of General Orders 112, 112A, and 112B Section 107.....	1961-1970
12		Violation of PG&E internal policies requiring retention of eng. records	1964-2010
13	21.	Pre-1970 Leak Records missing, incomplete and inaccessible ⁴²	1930-2010
14		Violation of Public Utilities Code Section 451	1951-2010
15		Violation of California Public Utilities Act Article II Section 13(b)....	1930-1951
16		Violation of ASME Standards Section B31.8	1955-2010
17		Violation of General Orders 112, 112A, and 112B Section 107.....	1961-1970
18	22.	Post 1970 Leak Records incomplete and inaccessible ⁴³	1970-2010
19		Violation of Public Utilities Code Section 451	1970-2010
20		Violation of ASME Standards Section B31.8	1955-2010
21		Violation of General Orders 112, 112A, and 112B Section 107.....	1961-1970
22		Violation of PG&E internal policies requiring retention of leak	
23		repair records ⁴⁴	1994-2010

³⁹ Felts Testimony, Section 4.4

⁴⁰ Felts Testimony, Appendix 8.

⁴¹ Felts Testimony, Section 4.5

⁴² Felts Testimony, Section 4.6

⁴³ Felts Testimony, Section 4.6

⁴⁴ Felts Testimony, 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.

1 Violation of PG&E internal policy requiring retention of leak survey maps⁴⁵2010

2 23. Records to track salvaged and reused pipe missing⁴⁶.....1954-2010

3 Violation of Public Utilities Code Section 4511954-2010

4 Violation of PG&E internal policies requiring retention of

5 eng. records April⁴⁷ 1994-2010

6 24. Bad data in Pipeline Survey Sheets and the Geographic Information

7 System⁴⁸.....1974-2010

8 Violation of Public Utilities Code Section 4511974-2010

9 Violation of PG&E internal policies requiring retention of

10 eng. records.....1974-2010

11 25. Use of an Integrity Management Risk Model that uses inaccurate

12 data⁴⁹.....2004-2010

13 Violation of Public Utilities Code Section 4512004-2010

14 26. 1988 weld failure – no Failure Report.....⁵⁰1988-2010

15 Violation of Public Utilities Code Section 4511988-2010

16 27. 1963 weld failure – no Failure Report.....⁵¹1963-2010

17 Violation of Public Utilities Code Section 4511963-2010

18

⁴⁵ Felts Testimony, 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.

⁴⁶ Felts Testimony, Section 4.7

⁴⁷ Felts Testimony, Appendix 8 (engineering records row). 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. These policies apply from 1994 to 2010.

⁴⁸ Felts Testimony, Section 5.0

⁴⁹ Felts Testimony, Sections 3.0-4.0

⁵⁰ Felts Testimony, Section 4.4

⁵¹ Felts Testimony, Section 4.4

1 **Table 2 - Corrections to Exhibits for March 12, 2012 Testimony**

Page	Sentence	New Exhibits
2, footnote #3	Add “p.6” after “NTSB_460802”. Response to DR 3 Q 11 was inadvertently omitted from exhibits.	OII_DR_003-Q11
2, footnote #6	NTSB 469689 was inadvertently omitted	NTSB_469689
3, lines 7-9	“However, as described below, there are numerous examples of PG&E’s inconsistent positions about its MAOP for Line 132 in its records, which are compounded by the lack of any records explaining these discrepancies.”	Pages from OII_DR_30-Q30suppAtch02, p.4; OII_DR_30-Q30suppAtch01, p.3; OII_DR_30-Q30suppAtch01-2, p.5; Pages _OII_DR_30-Q30suppAtch01, p.4; Pages(2)_OII_DR_30-Q30suppAtch01, p.4; OII_DR_CPUC_7-Q12Atch61; OII_DR_30-Q30suppAtch03; Page from P3-27180
6, footnote #30	P2-7 and P2-670 were inadvertently omitted	P2-7, P2-670
8, footnote #36	DR_1_Q1b_Atch_42 was inadvertently omitted	OII_DR_1_Q1b_Atch_42
9-10, footnotes #40 -#43	“This appears to be a significant inaccuracy in the diagram because, during the emergency, PG&E personnel were attempting to control high-pressure gas that they thought might be by-passing the Terminal.” Transcript excerpt provided. Response to DR 8 Q 8 Atchs 3 and 4 provided to complete footnotes 41-43	Transcript_Excerpt_Bypass OII_DR_8-Q08_Atch_03 OII_DR_8-Q08_Atch_04
12, lines 1-3	“Control room operators failed to acknowledge the alarm and did not recognize the drop in pressure until almost 30 minutes later, when someone from another location called in and asked them to look for the pressure drop on their SCADA screens.”	Transcript_Excerpt_Martin_Low_Pressure

12, footnote #54	Transcript excerpt inadvertently omitted	Transcript_Excerpt_Valves_Between_stations
12, footnote #55	<i>Add reference to included exhibit</i>	Excerpt_ER Confusion
14, footnote #59-60 and p. 15, footnote #63	The Company-wide Gas Emergency Plan was provided as file name: OII_DR1_Q8_Company-WideGasER_Plan_Compiled_from_DR1Q8	Exhibit was provided as OII_DR1_Q8_Company-WideGasER_Plan_Compiled_from_DR1Q8
15, footnote #64	<i>Reference should read: "Response to DR 9 Q1, Atch 1"</i>	OII_DR_CPUC_009-Q01Atch01
19, lines 13-14	"Despite the lack of data, PG&E and Bechtel continued to develop the risk assessment model." <i>Add reference to exhibits.</i>	OII_DR_5-Q11Atch01, Appendices B&C; OII_DR_5-Q11Atch03; P3-20020_1988
20, lines 8-9	<i>Correct the reference to form numbers in sentence: "PG&E collected leak data on "forms 62-4837 and 62-6358, much earlier than 1971, but failed to keep it in an accessible manner."</i>	P2-1149 P3-10041, p.51 P7-7018 PGE_009
26, footnote #109	P2-225(b) was inadvertently omitted	P2_225(b)
29, lines 19-22	"For instance, the Job File for the 1956 Crestmoor project that installed Line 132, Segment 180, has only two drawings. The drawings contain no details about the construction of the pipeline segment and there is no supporting documentation in the project file regarding the pipe used, the QA/QC performed or any other test or inspection information."	NTSB_460786 NTSB_466475 (330 MB)
31, footnote #119	<i>Add "and Response to DR 25 Q2(g) Supp 1, Atch 1, p. 563"</i>	OII_DR_025-Q02(g)Supp01Atch01
32, line 2	<i>After Figure 3, insert: "On February 28, 2012, PG&E provided a further response to the request for pipeline history files, acknowledging the 1987 internal letter and stating that it did not authorize the destruction or discarding of any pipeline files."</i>	OII_DR_055-Q01

	<i>(OII_DR_055-Q01) Nevertheless, PG&E still did not produce any pipeline history files.”</i>	
36, footnote#146	DR 17 Q 1 Atch 1 was inadvertently omitted	DR 17 Q 1 Atch 1
36, footnote #148	MAOP records referenced are provided as GM_98015_Weld_Insp_Rep_1948	GM_98015_Weld_Insp_Rep_1948
36, lines 23-24	“In most instances, the pipe that was replaced was salvaged.” <i>Add: “Refer to GO 28, 1912 re records for depreciation and plant replacement.”</i>	P3-30024; Salvaged98015_to_GM 130004; GO_28_1912
37, footnote #154	<i>Add to end of footnote: “During the OII, PG&E was repeatedly asked to produce the technical reports for Line 132 weld failures that occurred in 1963 and 1988 (OII_DR_041-Q05). PG&E has not produced the report on the 1963 weld failure. However, on March 7, 2012, nine months after the issue arose, PG&E produced a cover letter reporting the results of the analysis of the 1988 longitudinal weld failure, but still failed to produce the report referenced in the letter.(OII_DR_041-Q05Supp01Atch01)”</i>	OII_DR_041-Q05 OII_DR_041-Q05Supp01Atch01
41, footnote #169	<i>Add: P3-24246</i>	P3-24246
42, footnote #171	<i>Add: “See list of leaks DR 40 Q2 Atch 1”</i>	OII_DR_40-Q2Atch1
43, lines 6-8	“This conclusion is based on weld radiography reports that show acceptance of marginal and bad welds on pipe that was subsequently salvaged and sent to the company storage yard for reuse elsewhere in the system.”	See p. 37, footnote #148
43, line 21	“Yet, it appears that PG&E’s early accounting and engineering documents did keep track of salvaged and reused pipe.”	Salvage_1929_GM 130004

44, line 11	<i>Edit: after "San Bruno" add "but could not identify the source of the specific piece of pipe that failed."</i>	NTSB 460802 p.6 (See p. 2 footnote #3)
47, footnote #189	<i>Add to the end of the footnote: "(Response to CPSD_DR_215-Q05)"</i>	CPSD_DR_215-Q05

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1 **Supplement Appendix A: Excerpts from PG&E’s General Counsel’s Instructions**

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3 On September 11, 2010, PG&E’s General Counsel emailed instructions to all
4 company employees to preserve and retain all paper and electronic documents. That
5 email explained as follows:⁵²

6 “In essence, these instructions inform you of your legal
7 obligation to preserve in its present state any potentially
8 relevant information and, in the case of any doubt, to preserve
9 information. We want nothing discarded that may contain
10 potentially relevant information.

11 Item 2 of the instructions further stated:

12 “The term ‘document’ should be understood in the broadest
13 sense. Most importantly, ‘document’ refers to paper and
14 electronic material of every type. Paper documents include,
15 but are not limited to, memos (sent or unsent), letters (sent or
16 unsent, in draft or final form), handwritten notes (however
17 informal), forms, post-it notes, telephone messages, charts
18 and drawings, calendars, and day-timers, etc. Electronic
19 documents include, but are not limited to, e-mails (whether on
20 the Company’s e-mail system or in a personal account), word
21 processing documents, PowerPoint presentations, electronic
22 calendars, spreadsheets, tape recordings, text-messages, and
23 all other computer files and records. For electronic files, the
24 term ‘document’ includes all associated metadata and/or
25 embedded data.” [Emphasis added.]

26
27 Item 4 of PG&E instructions further provided:

28 “If any electronic files are set for automatic deletion after a
29 prescribed period of time, that function should be disabled. If
30 you inherit (or have inherited) any documents or files from a
31 departing employee, any potentially relevant documents kept
32 by that employee must be preserved and retained. [Emphasis
33 added.]

34 Item 11 of PG&E instructions also stated:

⁵² See Attachment 1 of PG&E Response to CPSD Data Request 210 Question 14 in San Bruno Incident OII.

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“Under no circumstances should you alter, destroy, discard,
or delete any potentially relevant document, file, or other
information. [Emphasis added.]