

United States District Court

FOR THE
NORTHERN DISTRICT OF CALIFORNIA

VENUE: SAN FRANCISCO

FILED
APR 1 11 30 AM '14
FBI

UNITED STATES OF AMERICA,

v.

CR 14 175
PACIFIC GAS AND ELECTRIC
COMPANY

TEH

DEFENDANT(S).

INDICTMENT

COUNTS ONE through TWELVE: 49 U.S.C. § 60123 -- Natural Gas Pipeline Safety Act

A true bill.

J. Dehen

Foreman

Filed in open court this 1 day of

April 2014

Karen L. F. J.

KAREN L. F. J.

JOSEPH C. SPERO

Clerk

UNITED STATES MAGISTRATE JUDGE

Bail, \$ Summons

DEFENDANT INFORMATION RELATIVE TO A CRIMINAL ACTION - IN U.S. DISTRICT COURT

BY: COMPLAINT INFORMATION INDICTMENT
 SUPERSEDING

OFFENSE CHARGED

COUNTS ONE through TWELVE - 49 U.S.C.
§ 60123 - Natural Gas Pipeline Safety Act

- Petty
- Minor
- Misdemeanor
- Felony

PENALTY:

\$500,000.00 PER COUNT, SPECIAL ASSESSMENT \$400.00 PER COUNT

PROCEEDING

Name of Complainant Agency, or Person (& Title, if any)

Zurvohn Maloof, Special Agent, U.S. Department of Transportation

person is awaiting trial in another Federal or State Court, give name of court

this person/proceeding is transferred from another district per (circle one) FRCrP 20, 21 or 40. Show District

this is a re prosecution of charges previously dismissed which were dismissed on motion of:

U.S. Att'y Defense

this prosecution relates to a pending case involving this same defendant

prior proceedings or appearance(s) before U.S. Magistrate regarding this defendant were recorded under

SHOW DOCKET NO.

MAGISTRATE CASE NO.

Name and Office of Person Furnishing Information on THIS FORM

MELINDA L. HAAG

U.S. Att'y Other U.S. Agency

Name of Asst. U.S. Att'y (if assigned)

STACEY P. GEIS

Name of District Court, and/or Judge/Magistrate Location
NORTHERN DISTRICT OF CALIFORNIA

FILED
APR - 1 2014

RICHARD W. WIERING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

DEFENDANT - U.S.

PACIFIC GAS AND ELECTRIC COMPANY

DISTRICT COURT NUMBER

TEH

CR 14 175

IS NOT IN CUSTODY

- 1) Has not been arrested, pending outcome this proceeding. If not detained give date any prior summons was served on above charges
- 2) Is a Fugitive
- 3) Is on Bail or Release from (show District)

IS IN CUSTODY

- 4) On this charge
 - 5) On another conviction
 - 6) Awaiting trial on other charges
- } Fed'l State
- If answer to (6) is "Yes", show name of institution

Has detainer been filed? Yes No

} If "Yes" give date filed

DATE OF ARREST

Month/Day/Year

Or... if Arresting Agency & Warrant were not

Month/Day/Year

DATE TRANSFERRED TO U.S. CUSTODY

This report amends AO 257 previously submitted

ADDITIONAL INFORMATION OR COMMENTS

PROCESS:

SUMMONS NO PROCESS* WARRANT Bail Amount: _____

If Summons, complete following:

Arraignment Initial Appearance

Defendant Address: _____

**Where defendant previously apprehended on complaint, no new summons or warrant needed, since Magistrate has scheduled arraignment*

Date/Time: April 1, 2014

Before Judge: Joseph Spero

Comments: _____

1 MELINDA HAAG (CABN 132612)
United States Attorney

FILED
APR - 1 2014
RICHARD W. WIEKING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

8 UNITED STATES DISTRICT COURT
9 NORTHERN DISTRICT OF CALIFORNIA
10 SAN FRANCISCO DIVISION

TEH

CR 14 175

11 UNITED STATES OF AMERICA,

12)
13)
14) Plaintiff,

15) v.

16)
17) PACIFIC GAS AND ELECTRIC COMPANY,

18)
19) Defendant.
20)
21)

) NO.)
) VIOLATIONS: Failure to Gather and Integrate)
) Relevant Data to Identify All Potential Threats To a)
) Gas Transmission Pipeline (49 U.S.C. § 60123 and 49)
) C.F.R. § 192.917(b)); Failure to Maintain Certain)
) Repair Records for a Gas Transmission Pipeline (49)
) U.S.C. § 60123 and 49 C.F.R. § 192.709(a)); Failure)
) to Identify and Evaluate Potential Threats to a Gas)
) Transmission Pipeline (49 U.S.C. § 60123 and 49)
) C.F.R. § 192.917(a)); Failure to Include All Potential)
) Threats and to Select a Suitable Threat Assessment)
) Method for a Gas Transmission Pipeline (49 U.S.C.)
) § 60123 and 49 C.F.R. § 192.919); Failure to)
) Prioritize a Gas Transmission Pipeline With an)
) Unstable Manufacturing Threat (49 U.S.C. § 60123)
) and 49 C.F.R. § 192.917(e)(3)); and Failure to)
) Prioritize and Assess a Gas Transmission Pipeline)
) With an Unstable Manufacturing Threat (49 U.S.C.)
) § 60123 and 49 C.F.R. § 192.917(e)(4))

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INDICTMENT

The Grand Jury charges:

At all times relevant to this Indictment unless otherwise indicated:

INTRODUCTORY ALLEGATIONS

1. PACIFIC GAS AND ELECTRIC COMPANY ("PG&E") was a California corporation headquartered in San Francisco, California, that provided natural gas and electric services to approximately 15 million customers in Northern and Central California.

2. PG&E was a pipeline operator that provided natural gas to customers through the use of over 6,000 miles of natural gas transmission pipelines and over 40,000 miles of distribution pipelines. Gas transmission pipelines are highly-pressurized, large-diameter lines that carry natural gas to smaller, less pressurized distribution pipelines that bring natural gas into homes, commercial buildings, and other facilities.

3. Line 132 was a high-pressure gas transmission pipeline owned and operated by PG&E in the Northern District of California. Line 132 ran underground from Milpitas, California, to San Francisco, California, passing through the City of San Bruno, California.

4. Line 132 was originally installed in or about and between 1944 and 1948 and consisted of hundreds of individual segments, the majority of which were in suburban or urban areas.

5. On September 9, 2010, at approximately 6:11 p.m., a portion of Line 132 (Segment 180) ruptured in a residential neighborhood of the City of San Bruno (the "San Bruno explosion"). Gas escaping from the rupture ignited, causing a fire that killed eight people and injured 58 others. The fire also damaged 108 homes, 38 of which were completely destroyed.

The Natural Gas Pipeline Safety Act of 1968

6. The Natural Gas Pipeline Safety Act of 1968 ("PSA") established minimum safety standards for pipeline transportation and for pipeline facilities. The purpose of the PSA was to protect against risks to life or property posed by pipeline transportation and pipeline facilities by improving the regulatory and enforcement authority of the Secretary of Transportation.

1 7. In 1970, pursuant to Chapter 601 of the PSA, the Secretary of Transportation issued
2 regulations codified in Section 192 of Title 49 of the Code of Federal Regulations, Subparts A through
3 M ("Section 192").

4 8. In 1979, Congress amended the PSA to add criminal penalties for knowing and willful
5 violations of any regulation or order issued pursuant to Chapter 601 of the PSA. 49 U.S.C. § 60123.

6 The Gas Transmission Integrity Management Rule and Relevant Regulations

7 9. Congress amended the PSA by enacting the Pipeline Safety Improvement Act of 2002
8 ("PSIA"). The Pipeline and Hazardous Materials Safety Administration ("PHMSA") issued the Gas
9 Transmission Integrity Management regulations ("IM regulations"), 49 C.F.R. Part 192, referred to as
10 Subpart O, to implement the requirements of the PSIA. The IM regulations specified how pipeline
11 operators were required to identify, prioritize, assess, evaluate, remediate, and validate the integrity of
12 segments of gas transmission pipelines that could, in the event of leak or failure, affect high-
13 consequence areas ("HCAs"). 49 C.F.R. §§ 192.901-192.949. An HCA is a locale where a release of
14 gas could pose a significant risk of injury or death.

15 10. The IM regulations required pipeline operators to identify threats on segments of their
16 gas transmission pipelines that operated in HCAs (hereinafter "covered segments"), rank the risk levels
17 of these identified threats, select an assessment method or technology with a proven application capable
18 of assessing the known or potential threats, create deadlines for both the initial and future assessments of
19 these covered segments, and address the threats identified and evaluated through mitigation,
20 remediation, and prevention. 49 C.F.R. §§ 192.907 and 192.921.

21 Regulations Regarding the Identification of Potential Threats

22 11. Under the IM regulations, pipeline operators had to identify and evaluate all potential
23 threats to a covered segment. 49 C.F.R. § 192.917(a). The nine major threats to gas transmission
24 pipelines were: third party damage, external corrosion, internal corrosion, stress corrosion cracking,
25 manufacturing threats, construction threats, equipment threats, external factors such as weather and
26 earthquakes, and incorrect operation. 49 C.F.R. § 192.7 (incorporating by reference American Society
27 of Mechanical Engineers ("ASME") B31.8S, 2004).

28 12. To identify and evaluate all potential threats to each covered segment, pipeline operators

1 were required to gather and integrate existing data and information on the entire pipeline that could be
2 relevant to the covered segment. 49 C.F.R. § 192.917(b). Section 192.917(b) required pipeline
3 operators to follow a specific industry standard - ASME B31.8S, section 4 - and, at a minimum, gather
4 and evaluate data for each covered segment and any similar, non-covered segments found in the entire
5 pipeline system, including, but not limited to:

- 6 • Past incident history and the root cause analysis of previous threats on the segment,
7 including leak and failure history.
- 8 • Records regarding past and ongoing corrosion of the segment.
- 9 • Continuous surveillance records regarding any changes along the segment including
10 failures, leaks, and earth movement as well as changes along the segment that might
11 affect its class location.
- 12 • Patrolling records regarding third party damage and encroachment threats to the segment.
- 13 • Maintenance history including repairs on the segment (pursuant to Section 192.709(a) of
14 Title 49 of the Code of Federal Regulations, each pipeline operator was required to
15 maintain the date, location, and description of each repair made to pipe so long as the
16 pipeline remained in service).
- 17 • Records of internal inspections for issues such as internal corrosion, seam welding faults
18 or repairs, and the existence of liquids being trapped or transported in the segment.
- 19 • The thickness of the walls of the segment.
- 20 • The diameter of the segment.
- 21 • The type of seams used along the segment and the corresponding “joint factor” that was
22 used to calculate the initial pressure-carrying capacity of the pipe.
- 23 • The manufacturer and date of manufacture of the segment.
- 24 • The “depth of cover” or the amount of clearance between the top of the segment and the
25 surface of the ground.
- 26 • Construction techniques, including bending or joining methods.
- 27 • Material properties, such as specified minimum yield strength (“SMYS”).
- 28 • The results of any pressure tests conducted on the pipeline containing the segment
(pursuant to Section 192.517 of Title 49 of the Code of Federal Regulations, each
pipeline operator was required to retain for the useful life of a pipeline a record of each
strength pressure test performed under Section 192.505 of Title 49 of the Code of Federal
Regulations for each segment of a steel pipeline that was to operate at a hoop stress of 30
percent or more of the SMYS).

- 1 • Any pressure fluctuations or records of “cyclic fatigue” or the weakening of a pipeline
2 due to pressure fluctuations on the pipeline containing the segment.
- 3 • Normal maximum and minimum operating pressures for the segment.
- 4 • Any audits or reviews that identified issues for the segment or made recommendations
5 for mitigation or prevention of those issues.

6 Baseline Assessment Plan and Assessment Method Regulations

7 13. The IM regulations required pipeline operators to prepare, no later than December 17,
8 2004, a Baseline Assessment Plan (“BAP”) that identified all of the pipeline operator’s covered
9 segments, the known or potential threats to each covered segment, the methods selected to assess the
10 integrity of the pipeline for each covered segment, and deadlines for conducting an initial assessment
11 and re-assessment. 49 C.F.R. § 192.919.

12 14. Once the known and potential threats were identified on a covered segment, the IM
13 regulations required pipeline operators to assess the integrity of the pipeline in each covered segment by
14 using an assessment method that was capable of addressing the specific identified threats. 49 C.F.R.
15 § 192.921(a). The four assessment methods available to assess whether a covered segment was
16 susceptible to the identified threats were:

17 (1) Subpart J pressure testing: a method of testing the strength of a pipeline by pressurizing a
18 portion of the pipeline to a specified test pressure and monitoring that portion of the pipeline for
19 leaks or ruptures. The test had to comply with the requirements of Subpart J of Section 192.
20 When the test was performed with a liquid, this method was also known as a “hydrotest” or a
21 “Subpart J hydrotest.” 49 C.F.R. § 192.921(a)(2).

22 i. Starting in 1970, all new gas transmission pipelines had to be pressure tested or
23 hydrotested before being placed into service in order to ensure the pipeline’s integrity. Pursuant
24 to Section 192.619 of Title 49 of the Code of Federal Regulations, gas transmission pipelines
25 installed before 1970 that were found to be in “satisfactory condition” were grandfathered in and
26 did not have to be pressure tested or hydrotested unless otherwise required by law.

27 ii. A pressure test or hydrotest was the only assessment method that could test the
28 strength of a pipeline. Performing a pressure test or hydrotest on a gas transmission pipeline
necessitated the expense and inconvenience of taking the pipeline out of service temporarily.

1 iii. Pressure testing or hydrotesting assessed the integrity of a pipeline for such
2 potential threats as external damage, external corrosion, internal corrosion, stress corrosion
3 cracking, and manufacturing and construction threats, such as seam defects and seam corrosion.

4 (2) In-line inspection (“ILI”): a method of examining the internal characteristics of a pipeline by
5 sending a computerized inspection tool, often called a “pig,” through the inside of the pipeline. 49
6 C.F.R. § 192.921(a)(1).

7 i. Like pressure testing or hydrotesting, ILI assessed the integrity of the pipeline for
8 such potential threats as external damage, external corrosion, internal corrosion, stress corrosion
9 cracking, and manufacturing and construction threats. ILI, however, could not test the actual
10 strength of a pipeline.

11 (3) Direct assessment (“DA”): a process used to detect the presence of corrosion and assess the
12 potential threat to the integrity of the pipeline. 49 C.F.R. § 192.921(a)(3). The three methods of DA
13 were:

14 i. External corrosion direct assessment or “ECDA,” which tested the outside of
15 pipelines for external corrosion and third party damage using an electrical or magnetic
16 technology above ground and then following up with interspersed excavations to uncover the
17 portions of the pipelines most likely to have external corrosion. Because ECDA only assessed
18 the outside of pipelines, it could not assess the integrity of pipelines for potential internal threats
19 such as manufacturing or construction defects;

20 ii. Internal corrosion direct assessment (“ICDA”), which tested for corrosion inside
21 the pipeline; and

22 iii. Stress crack corrosion direct assessment (“SCCDA”), which was only applicable
23 to pipelines operating over 60% of SMYS and thus not applicable in most HCAs.

24 (4) New Technology: any technology that a pipeline operator demonstrated could provide an
25 understanding of a pipe’s condition that was equivalent to the understanding that could be gained using
26 pressure tests or hydrotests, ILI, or DA. Operators could only use a new technology if PHMSA
27 approved its use. 49 C.F.R. § 192.921(a)(4).

28 //

Regulations Related to the Prioritization of Manufacturing Threats

15. The IM regulations required operators to prioritize the risk level of covered segments in the BAP. 49 C.F.R. § 192.917(e)(3)(i)-(iii). Operators were required to prioritize covered segments with unstable manufacturing threats as “high risk.” Covered segments with manufacturing threats were considered unstable if the operating pressure of the pipeline containing that segment increased above the maximum operating pressure experienced by that segment in the five years before the segment was identified as being in an HCA (the “5-year MOP”), the maximum allowable operating pressure (“MAOP”) increased, or the stresses leading to cyclic fatigue increased. 49 C.F.R. § 192.917(e)(3)(i)-(iii).

16. For pipelines with unstable manufacturing threats, operators had to use an assessment method that was capable of evaluating manufacturing threats, such as a hydrotest. 49 C.F.R. § 192.917(e)(3) and (4). ECDA could not be used because ECDA does not assess manufacturing threats. 49 C.F.R. § 192.923(a).

17. Pipeline operators also had to prioritize as high risk and select an assessment method capable of assessing seam integrity and seam corrosion anomalies for covered pipeline segments that contained:

- a) low-frequency electric resistance welded (“ERW”) pipe;
- b) lap welded pipe; or
- c) other pipe that satisfies the conditions specified in ASME/ANSI B31.8S, Appxs. A4.3 & A4.4;

and had experienced either:

- d) a seam failure; or
- e) an increase in operating pressure over the 5-year MOP.

49 C.F.R. § 192.917(e)(4).

Regulations Related to Continuous Evaluation of Covered Pipeline Segments

18. Pipeline operators were required to periodically evaluate the integrity of each covered segment. The periodic evaluation included considering and integrating past and present integrity assessment results, integrating data and assessing risk of the entire pipeline, and reviewing decisions

1 regarding remediation, additional prevention, and mitigation actions. Operators were required to use the
2 results from these periodic evaluations to identify the threats specific to each covered segment and the
3 risk represented by these threats. 49 C.F.R. § 192.937.

4 19. After an initial assessment, pipeline operators had to re-assess their lines using an
5 assessment method capable of assessing a particular threat or combination of threats including new
6 threats, and within a certain time period depending on the results the periodic evaluations, but not to
7 exceed seven years. 49 C.F.R. §§ 192.937 and 192.939.

8 PG&E's Practices Relating to Gas Transmission Pipelines

9 A. General Recordkeeping

10 20. Starting at a time unknown to the grand jury, and continuing until the San Bruno
11 explosion, PG&E learned that it did not have complete data for its gas transmission pipelines due to
12 missing records and errors and omissions in existing records.

13 21. PG&E received notice of recordkeeping problems through employees, through regulatory
14 agencies including the National Transportation Safety Board and the California Public Utilities
15 Commission, and from third party auditors and consultants.

16 22. Despite knowledge of these deficiencies, PG&E did not create a recordkeeping system
17 for gas operations that would ensure that pipeline records were accessible, traceable, verifiable, accurate,
18 and complete. PG&E's recordkeeping deficiencies included:

- 19
- 20 • PG&E did not maintain accurate and complete leak records for its gas transmission
pipelines.
 - 21 • PG&E did not maintain accurate and complete records regarding encroachment of
22 population along gas transmission pipelines.
 - 23 • PG&E did not maintain repair records for its gas transmission pipelines in a traceable and
24 accessible manner.
 - 25 • PG&E did not retain or maintain weld maps and weld inspection records for its gas
26 transmission pipelines.
 - 27 • PG&E did not maintain complete records of the manufacturer of its gas transmission
28 pipelines in service.

- 1 • PG&E did not retain or maintain Subpart J pressure test records for the life of all of its
2 gas transmission pipelines.
- 3 • PG&E did not maintain accurate, complete, or accessible “job files,” that contained,
4 among other things, pipe specifications, construction records, pressure test records, and
5 purchasing records.

6 B. Integrity Management Program

7 23. In the late 1990s, in advance of the enactment of the IM regulations, PG&E created a
8 computer database, called the Geographic Information System (the “GIS database”). PG&E intended
9 that the GIS database would contain information about each natural gas transmission pipeline segment,
10 such as pipe specifications and pressure test data, and would be used to make integrity management
11 decisions.

12 24. To create the GIS database, PG&E relied on pipeline survey sheets that contained
13 erroneous and incomplete information. In creating the GIS database, PG&E undertook no quality
14 control or quality assurance to ensure the data taken from the pipeline survey sheets was accurate. From
15 GIS’s inception, PG&E was aware that the database contained erroneous and incomplete information.

16 25. PG&E relied on information in the GIS database to make integrity management
17 decisions, including the identification of threats to each covered segment contained in the initial BAP.

18 C. Threat Identification

19 26. In identifying and evaluating threats as required by Sections 192.917(a) and (b), PG&E
20 failed to gather and integrate all relevant data for many of its older transmission lines, including, but not
21 limited to:

- 22 • past incident history for both covered and non-covered segments, including leaks with
23 unknown causes (“unknown” because PG&E either had no records, or could not or did not
24 locate such records);
- 25 • pipeline history for covered and non-covered segments that were greater than one mile
26 away from the covered segments being analyzed for manufacturing and construction
27 threats;
- 28 • maintenance history, including repairs;
- accurate and complete pipeline data, including wall thickness, diameter, seam type,
manufacturer, and date of manufacture;
- pressure fluctuations;
- validated normal, maximum, and minimum operating pressures;

- 1 • threats created by cyclic fatigue; and
- 2 • threats created by internal corrosion.

3 D. Assessment Method Selection

4 27. PG&E relied on inaccurate and incomplete records to select assessment methods to assess
5 the integrity of covered segments for known or potential threats as required by Section 192.921(a).

6 28. In 2004, PG&E created a written policy on compliance with the IM regulations regarding
7 data gathering that instructed PG&E employees to rely on available, verifiable information or
8 “information that c[ould] be obtained in a timely manner.”

9 29. In 2004, PG&E also created a written policy that proscribed, with certain limited
10 exceptions, the use of hydrotesting or pressure testing as an assessment method for assessing the
11 integrity of covered segments. Pursuant to this policy, the only two options (other than a PHMSA-
12 approved new technology) for assessing threats on covered segments were ILI and ECDA. PG&E
13 instituted this policy having determined that, due to economic considerations and the physical attributes
14 of its transmission lines, ILI was not a feasible assessment method for approximately 80% of its
15 transmission lines that were subject to the IM regulations.

16 30. For the approximately 80% of the gas transmission pipelines where PG&E determined
17 that ILI was not economically or physically feasible, PG&E selected ECDA to assess threats on those
18 pipelines. PG&E chose ILI as an assessment method for the approximately 20% of its remaining natural
19 gas transmission pipelines.

20 E. Assessment Avoidance on Older Transmission Lines

21 i. Planned Pressure Increases

22 31. When the IM regulations went into effect, PG&E knew that thousands of miles of its gas
23 transmission pipelines had never been subjected to a Subpart J pressure test, because the pipelines were
24 installed before 1970 and were grandfathered in or because PG&E had not maintained a record of such a
25 pressure test. As PG&E knew, many of these pipelines had a known or potential manufacturing threat
26 due to their age, manufacturer, and/or history.

27 32. In order to maintain the then-current operating pressures of these pipelines without
28 having to subject the pipelines to a Subpart J pressure test, PG&E adopted a practice in 2003 called

1 “planned pressure increases” (“PPIs”). To conduct a PPI, PG&E intentionally raised the pressure in
2 several old highly-pressurized gas transmission pipelines located in HCAs to the pipelines’ maximum
3 allowable operating pressures (MAOP) for two hours. In so doing, PG&E at times exceeded the lines’
4 5-year MOPs and/or MAOPs. PG&E failed to review the history of the pipelines or verify the accuracy
5 of its data prior to executing the PPIs to determine whether intentionally increasing the pressure on these
6 older pipelines would affect the integrity of the pipeline. PG&E periodically conducted PPIs from 2003
7 until the San Bruno explosion.

8 33. PG&E executed PPIs on a number of its high pressure gas transmission pipelines,
9 including lines 132, 101, and 109, all of which had covered segments with manufacturing threats that
10 had never been subject to a Subpart J pressure test or for which records of such a test were not available.
11 From 2002 until the San Bruno explosion, PG&E assessed these pipelines with ECDA.

12 ii. Unplanned Pressure Increases

13 34. PG&E was aware that hundreds of covered segments totaling over 80 miles of gas
14 transmission pipelines had never been subject to a Subpart J pressure test and had manufacturing threats
15 that could be considered unstable due to unplanned pressure increases that exceeded the pipelines’
16 respective 5-year MOPs. These covered segments were found on numerous gas transmission pipelines
17 operated by PG&E, including, but not limited to, segments on Lines 132, 153, and DFM 1816-01.

18 35. Section 192.917(e) required PG&E to prioritize the covered segments with unstable
19 manufacturing threats as high risk and assess them using an assessment method that evaluated the
20 integrity of the covered segment to determine the risk of failure from the unstable manufacturing threats,
21 such as a Subpart J pressure test. For all of these covered segments, despite knowledge of the
22 requirements of Section 192.917(e), PG&E chose not to reprioritize these pipelines as high risk and/or
23 properly assess the integrity of each segment to determine the risk of failure. Instead, PG&E continued
24 to choose ECDA to assess the integrity of these pipelines even though PG&E knew ECDA did not
25 assess unstable manufacturing threats.

26 36. To avoid having to prioritize these pipelines as “high risk” and properly assess the
27 pipelines for the known threats, PG&E chose only to consider a manufacturing threat unstable if the
28 pressure on the pipeline exceeded the 5-year MOP by 10% or more. PG&E adopted and implemented

1 this approach despite knowing since 2004 that PHMSA had issued regulations and additional guidance
2 on those regulations that stated any increase in pressure that went above the 5-year MOP, regardless of
3 amount, destabilized a manufacturing threat and required PG&E to prioritize the pipeline as high risk
4 and to properly assess the pipeline. PG&E maintained this practice until 2011.

5 F. Line 132

6 37. When identifying threats on Line 132, and when determining the appropriate assessment
7 technology to use in evaluating those threats, PG&E did not know the thickness of the pipeline walls for
8 approximately 42% of Line 132, either because PG&E did not have records describing wall thickness or
9 it could not or did not access records with this information.

10 38. PG&E did not know the manufacturer for approximately 80% of the hundreds of
11 segments on Line 132 either because PG&E did not have such records, or could not or did not access
12 such records with this information.

13 39. PG&E did not know the depth of cover for approximately 80% of Line 132 because
14 PG&E did not have such records, or could not or did not access such records with this information.

15 40. PG&E used improper yield strength or SMYS values for several segments of pipe on
16 Line 132 with unknown yield strengths.

17 i. Segment 180

18 41. Segment 180, the portion of Line 132 that ruptured, was located in an HCA and ran
19 through a densely populated suburban development in the City of San Bruno. Segment 180 consisted of
20 six short lengths or "pups" of 30-inch diameter pipe along with normal lengths of pipe. The date of
21 manufacture of these pups is unknown, but the manufacture date was prior to 1956. The pups were
22 welded together and installed in approximately 1956 in a manner that violated industry standards
23 concerning fabrication of gas transmission pipelines in effect at the time. One or more of the pups had a
24 defective seam weld. The segment, in part due to the defective pup or pups, had a yield strength
25 significantly less than the yield strength that PG&E recorded and relied upon for integrity management
26 purposes.

27 42. PG&E's records reflected the following for Segment 180:

- 28
- The pipe was seamless.

- 1 • The SMYS was 42,000 psi.
- 2 • The depth of cover was unknown.
- 3 • The manufacturer of the pipe was unknown.
- 4 • The manufacture date of the pipe was 1956.
- 5 • A pressure test had been performed in 1961.
- 6 • The MAOP was 400 psi.

7 43. In fact, the pipe in Segment 180 was seamed, not seamless. The SMYS was unknown,
8 but measured after the San Bruno explosion at significantly less than 42,000 psi for four of the six pups.
9 The pipe manufacturer date was unknown, but occurred well before 1956. No records of a pressure test
10 existed showing that any pressure test, let alone a Subpart J pressure test, had been performed on
11 Segment 180. Other records in PG&E's files also showed the MAOP for Line 132 as 375 and 390 psi.

12 44. At no time between installation of the defective pup or pups and the San Bruno explosion
13 did PG&E check or confirm whether its records accurately reflected the data relevant to assessing the
14 integrity of Segment 180, even though PG&E knew that GIS contained incomplete and inaccurate data.

15 ii. Integrity Management For Line 132

16 45. PG&E identified segments of Line 132 as being in an HCA in 2002 and began
17 conducting ECDA on Line 132 in 2002. PG&E also conducted ECDA on Line 132 in 2003, 2004, 2006,
18 2007, 2009, and 2010.

19 46. In identifying the threats that existed on Line 132 and choosing an assessment method to
20 assess those identified threats, PG&E knowingly relied on erroneous and incomplete information from
21 the GIS database and failed to gather and integrate, among other things, the following data and
22 information:

- 23 • Leak data, including the cause of over 30 prior leaks on segments of Line 132; instead
24 PG&E adopted a practice that it would not consider leaks with "unknown" causes when
25 deciding if ECDA was a proper assessment method;
- 26 • Industry and PG&E data that showed that double submerged arc weld "DSAW"
27 pipe manufactured by Western Consolidated Steel, which was found on segments
28 of Line 132, including Segment 181, had pipe body and longitudinal seam defect
issues;
- A seam weld defect in DSAW pipe that was discovered on a different segment of Line
132, and was similar to pipe on both Segment 180 and Segment 181, and was repaired in

1 1988;

- 2 • Multiple longitudinal seam cracks found during radiography of girth welds on portions of
3 Line 132 that were constructed in 1948;
- 4 • A longitudinal seam weld defect in DSAW pipe discovered on a different segment of
5 Line 132 in 1992 when a tie-in girth weld was radiographed;
- 6 • A defective weld found on Segment 186 of Line 132 in 2009. The segment was
7 originally fabricated by Consolidated Western using pipe similar to Segment 180 and
8 Segment 181 and installed in 1948, at or near the time when Segment 180 was originally
9 installed;
- 10 • A field girth weld defect found on Segment 189 in 2009. Segment 189 was also
11 originally fabricated by Consolidated Western using DSAW pipe installed in 1948;
- 12 • Whether any salvaged or re-used pipe, for which PG&E did not keep records,
13 including manufacturer, dates of use, and history of the pipe, had been used on
14 Line 132;
- 15 • Documents related to the design, manufacturer, construction, or testing of
16 Segment 180 when it was relocated in 1956, including whether any salvaged pipe
17 was used;
- 18 • Information from the 1956 construction file related to the six pups installed on
19 Segment 180 by PG&E;
- 20 • The potential impact of cyclic fatigue or other loading conditions on Line 132
21 from planned or unplanned pressure fluctuations; and
- 22 • Additional construction defects on Line 132.

23 47. PG&E also knowingly failed to gather and integrate the following relevant data from
24 similar gas transmission pipeline segments as required by 49 C.F.R. § 192.917(b):

- 25 • A seam leak in DSAW pipe found on Line 300B in 1958;
- 26 • A characterization evaluation of nearby Line 109 girth welds in 1994;
- 27 • A Subpart J pressure test failure in 1974 of a seam weld with lack of penetration
28 on DSAW pipe found on Line 300B, and which was similar to DSAW pipe found
on Segment 180 and Segment 181;
- Laboratory test reports from 1975 relating to Line 101 girth welds; and,
- Cracking of a seam weld in DSAW pipe in 1996 on Line 109 which paralleled
Line 132.

1 48. Relying on inaccurate and incomplete information regarding the pipeline attributes and
2 history of Line 132, PG&E knowingly chose ECDA as the assessment method to assess the integrity of
3 covered segments on Line 132, including Segment 180, starting in 2002 and continuing until the San
4 Bruno explosion.

5 49. In 2003 and again in 2008, as part of PG&E's PPIs, PG&E intentionally raised for a two-
6 hour period the pressure of Line 132 at least 25 psi above the normal operating pressure the pipeline had
7 experienced for decades in order to maintain a current MOP for Line 132 without having to conduct a
8 Subpart J pressure test. PG&E undertook this practice without conducting any review of the pipeline's
9 history, including past leaks and the cause of such leaks, or verification of the pipeline's specifications
10 in order to assess whether intentionally increasing the pressure on Line 132 more than 25 pounds higher
11 than the line had experienced in decades would affect the integrity of the pipeline.

12 50. On July 23, 2009, Line 132, at a point north of Segment 180, experienced an unplanned
13 pressure increase that exceeded that segment's 5-year MOP. That segment of Line 132 had a known
14 manufacturing threat that was destabilized when the pipeline experienced this pressure increase.
15 Despite knowledge of this pressure excursion and the requirement to properly assess unstable
16 manufacturing threats, PG&E chose to assess that segment of Line 132 in 2009 using ECDA even
17 though PG&E knew that ECDA could not assess unstable manufacturing threats.

18 THE CHARGES

19 COUNT ONE: (49 U.S.C. § 60123 – Natural Gas Pipeline Safety Act) [Line 132]

20 51. The allegations set forth in paragraphs 1-12, 20-26, and 37-50 above are re-
21 alleged and incorporated herein by reference.

22 52. Starting in or about December 2003, and continuing through on or about
23 September 9, 2010, in the Northern District of California, the defendant,

24 PACIFIC GAS AND ELECTRIC COMPANY,

25 by and through the actions of its employees, knowingly and willfully violated a minimum safety
26 standard for pipelines carrying natural gas, as set forth in Title 49, Code of Federal Regulations,
27 Section 192.917(b). Specifically, PACIFIC GAS AND ELECTRIC COMPANY, knowingly and
28 willfully failed to gather and integrate existing data and information on a line, specifically Line

1 132, that could be relevant to identifying and evaluating all potential threats on covered segments
2 of that line, all in violation of Title 49, United States Code, Section 60123.

3 COUNT TWO: (49 U.S.C. § 60123 -- Natural Gas Pipeline Safety Act)

4 53. The allegations set forth in paragraphs 1-12, 20-26, and 37-47 above are re-
5 alleged and incorporated herein by reference.

6 54. Starting on a date unknown to the grand jury and continuing until at least on or
7 about September 9, 2010, in the Northern District of California, the defendant,

8 PACIFIC GAS AND ELECTRIC COMPANY,

9 by and through the actions of its employees, knowingly and willfully violated a minimum safety
10 standard for pipelines carrying natural gas, as set forth in Title 49, Code of Federal Regulations,
11 Section 192.709(a). Specifically, PACIFIC GAS AND ELECTRIC COMPANY, knowingly and
12 willfully failed to maintain records concerning the date, location, and description of each repair
13 made to a line, specifically Line 132, all in violation of Title 49, United States Code, Section
14 60123.

15 COUNTS THREE THROUGH FIVE: (49 U.S.C. § 60123 – Natural Gas Pipeline Safety Act)

16 55. The allegations set forth in paragraphs 1-12, 18, 19-26, and 37-50 above are re-alleged
17 and incorporated herein by reference.

18 56. Starting on a date unknown to the grand jury and continuing through on or about the
19 dates set forth in the table below, in the Northern District of California, the defendant,

20 PACIFIC GAS AND ELECTRIC COMPANY,

21 by and through the actions of its employees, knowingly and willfully violated a minimum safety
22 standard for pipelines carrying natural gas, as set forth in Title 49, Code of Federal Regulations,
23 Section 192.917(a). Specifically, PACIFIC GAS AND ELECTRIC COMPANY, knowingly and
24 willfully failed to identify and evaluate potential threats to covered segments on the lines set
25 forth below:

26 //

27 //

28

Count	Date	Line
3	January 22, 2010	Line 132
4	January 22, 2010	Line 153
5	January 22, 2010	DFM 1816-01

All in violation of Title 49, United States Code, Section 60123.

COUNTS SIX THROUGH EIGHT: (49 U.S.C. § 60123 -- Natural Gas Pipeline Safety Act)

57. The allegations set forth in paragraphs 1-50 above are re-alleged and incorporated herein by reference.

58. Starting on a date unknown to the grand jury and continuing through on or about the dates set forth in the table below, in the Northern District of California, the defendant,

PACIFIC GAS AND ELECTRIC COMPANY,

by and through the actions of its employees, knowingly and willfully violated a minimum safety standard for pipelines carrying natural gas, as set forth in Title 49, Code of Federal Regulations, Section 192.919. Specifically, PACIFIC GAS AND ELECTRIC COMPANY, knowingly and willfully failed to include in its annual baseline assessment plan all potential threats on a covered segment and failed to select the most suitable assessment method to assess all potential threats on covered segments on the lines set forth below:

Count	Date	Line
6	January 22, 2010	Line 132
7	January 22, 2010	Line 153
8	January 22, 2010	DFM 1816-01

All in violation of Title 49, United States Code, Section 60123.

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COUNTS NINE THROUGH ELEVEN: (49 U.S.C. § 60123 -- Natural Gas Pipeline Safety Act)

59. The allegations set forth in paragraphs 1-10, 13-19, 27-40, and 49-56 above are re-alleged and incorporated herein by reference.

60. Starting on a date unknown to the grand jury and continuing through on or about the dates set forth in the table below, in the Northern District of California, the defendant,

PACIFIC GAS AND ELECTRIC COMPANY,

by and through the actions of its employees, knowingly and willfully violated a minimum safety standard for pipelines carrying natural gas, as set forth in Title 49, Code of Federal Regulations, Section 192.917(e)(3). Specifically, PACIFIC GAS AND ELECTRIC COMPANY, knowingly and willfully failed to prioritize covered segments of lines as high risk segments for the baseline assessment or a subsequent reassessment, after a changed circumstance rendered manufacturing threats on segments of the lines set forth below unstable:

Count	Date	Line
9	January 22, 2010	Line 132
10	January 22, 2010	Line 153
11	January 22, 2010	DFM 1816-01

All in violation of Title 49, United States Code, Section 60123.

COUNT TWELVE: (49 U.S.C. § 60123 -- Natural Gas Pipeline Safety Act)

61. The allegations set forth in paragraphs 1-10, 13-19, 27-40, and 49-56 above are re-alleged and incorporated herein by reference.

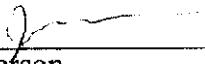
62. Starting on a date unknown to the grand jury, and continuing through January 22, 2010, in the Northern District of California, the defendant,

PACIFIC GAS AND ELECTRIC COMPANY,

by and through the actions of its employees, knowingly and willfully violated a minimum safety standard for pipelines carrying natural gas, as set forth in Title 49, Code of Federal Regulations, Section 192.917(e)(4). Specifically, PACIFIC GAS AND ELECTRIC COMPANY, knowingly and willfully failed to prioritize covered segments of a line, specifically DFM 1816-01, as high risk segments for a baseline assessment or a subsequent reassessment after a changed

1 circumstance rendered manufacturing threats on those segments unstable, and failed to analyze
2 covered segments to determine the risk of failure from such manufacturing threats, all in
3 violation of Title 49, United States Code, Section 60123.

4
5
6 DATED: 1, 2014


Foreperson

7
8 MELINDA HAAG
United States Attorney

9 
10 J. DOUGLAS WILSON
Chief, Criminal Division

11
12 (Approved as to form: 

AUSA GEIS
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SAUSA HALBERSTADT
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