

**PUBLIC UTILITIES COMMISSION**505 VAN NESS AVENUE
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TO PARTIES OF RECORD IN INVESTIGATION (I.) 12-01-007, I.11-02-016, and I.11-11-009.

Investigation 12-01-007 was filed on January 12, 2012 and is assigned to Commissioner Michael R. Peevey and Administrative Law Judge (ALJ) Mark Wetzell. Investigation 11-02-016 was filed on February 24, 2011 and is assigned to Commissioner Michel Peter Florio and ALJ Amy Yip-Kikugawa. Investigation 11-11-009 was filed on November 10, 2011 and is assigned to Commissioner Michel Peter Florio and ALJ Amy Yip-Kikugawa. This is the decision of the Presiding Officers, ALJ Mark Wetzell and ALJ Amy Yip-Kikugawa, in these non-consolidated proceedings.

Any party to these adjudicatory proceedings may file and serve an Appeal of the Presiding Officers' Decision within 30 days of the date of issuance (i.e., the date of mailing) of this decision. In addition, any Commissioner may request review of the Presiding Officers' Decision by filing and serving a Request for Review within 30 days of the date of issuance.

Appeals and Requests for Review must set forth specifically the grounds on which the appellant or requestor believes the Presiding Officers' Decision to be unlawful or erroneous. The purpose of an Appeal or Request for Review is to alert the Commission to a potential error, so that the error may be corrected expeditiously by the Commission. Vague assertions as to the record or the law, without citation, may be accorded little weight.

Appeals and Requests for Review must be served on all parties and accompanied by a certificate of service. Any party may file and serve a Response to an Appeal or Request for Review no later than 15 days after the date the Appeal or Request for Review was filed. In cases of multiple Appeals or Requests for Review, the Response may be to all such filings and may be filed 15 days after the last such Appeal or Request for Review was filed. Replies to Responses are not permitted. (See, generally, Rule 14.4 of the Commission's Rules of Practice and Procedure at www.cpuc.ca.gov.)

If no Appeal or Request for Review is filed within 30 days of the date of issuance of the Presiding Officers' Decision, the decision shall become the decision of the Commission. In this event, the Commission will designate a decision number and advise the parties by letter that the Presiding Officers' Decision has become the Commission's decision.

/s/ MARYAM EBKE for
Timothy J. Sullivan
Chief Administrative Law Judge (Acting)

TJS:lil
Attachment

Decision PRESIDING OFFICER'S DECISION (Mailed 9/2/2014)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Investigation on the Commission's Own Motion into the Operations and Practices of Pacific Gas and Electric Company to Determine Violations of Pub. Util. Code § 451, General Order 112, and Other Applicable Standards, Laws, Rules and Regulations in Connection with the San Bruno Explosion and Fire on September 9, 2010.

Investigation 12-01-007
(Filed January 12, 2012)

(Not Consolidated)

Order Instituting Investigation on the Commission's Own Motion into the Operations and Practices of Pacific Gas and Electric Company with Respect to Facilities Records for its Natural Gas Transmission System Pipelines.

Investigation 11-02-016
(Filed February 24, 2011)

(Not Consolidated)

Order Instituting Investigation on the Commission's Own Motion into the Operations and Practices of Pacific Gas and Electric Company's Natural Gas Transmission Pipeline System in Locations with High Population Density.

Investigation 11-11-009
(Filed November 10, 2011)

(Not Consolidated)

PRESIDING OFFICERS' DECISION ON FINES AND REMEDIES TO BE IMPOSED ON PACIFIC GAS AND ELECTRIC COMPANY FOR SPECIFIC VIOLATIONS IN CONNECTION WITH THE OPERATION AND PRACTICES OF ITS NATURAL GAS TRANSMISSION SYSTEM PIPELINES

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PRESIDING OFFICERS' DECISION ON FINES AND REMEDIES TO BE IMPOSED ON PACIFIC GAS AND ELECTRIC COMPANY FOR SPECIFIC VIOLATIONS IN CONNECTION WITH THE OPERATION AND PRACTICES OF ITS NATURAL GAS TRANSMISSION SYSTEM PIPELINES

1. Summary

This decision adopts penalties to be imposed on Pacific Gas and Electric Company (PG&E) for violations arising from: (1) the September 9, 2010 San Bruno explosion and fire; (2) PG&E's recordkeeping practices for its gas transmission pipeline system and; (3) PG&E's failure to maintain the proper class designation for pipeline in areas of higher population density. In our companion decisions issued today – Decision (D). 14-XX-XXX, D.14-XX-XXX and D.14-XX-XXX – we found that PG&E committed 3,708 violations of various provisions of Part 192 of Title 49 of the Code of Federal Regulations, Pub. Util. Code § 451, the 1955 American Society of Mechanical Engineers Standard B.31.8 (and its subsequent revisions), General Order 112 (and its subsequent revisions), and Rule 1.1 of the Commission's Rules of Practice and Procedure. Many of these violations occurred over a number of years, for a total of 18,447,805 days in violation.

In light of the gravity and severity of the offenses, PG&E's statutory obligation to provide safe and reliable gas service, PG&E's own acknowledgement that it had failed to comply with federal and state regulations and PG&E's own procedures in multiple instances, the resulting deaths, other injuries and property damage, PG&E's violation of Rule 1.1 of the Commission's Rules of Practice and Procedure, and the Commission's and the public's interest in ensuring safe and reliable natural gas service, a significant penalty is warranted. In setting the penalty, we have considered a variety of factors, including the need to deter PG&E from committing future violations without

adversely impacting PG&E's ratepayers. We also take into consideration that PG&E has already been ordered to make pipeline safety improvements at shareholder expense. In light of these considerations, this decision imposes a fine of \$950,000,000, payable to the State General Fund, \$400,000,000 in disallowances, and approximately \$50,000,000 to implement over 75 remedies proposed by the Commission's Safety and Enforcement Division and other intervenors to enhance pipeline safety. The total amount of fines and disallowances adopted in this decision is \$1,400,000,000 which, when added to the disallowances adopted in Rulemaking (R.) 11-02-019, Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms, would exceed \$2,000,000,000.¹ The penalties adopted in today's decision send a strong message to PG&E, and all other pipeline operators, that they must comply with mandated federal and state pipeline safety requirements or face severe consequences.

This decision recognizes that some of the remedies adopted here may have already been mandated by the National Transportation Safety Board, the Pipeline and Hazardous Materials Safety Administration, the Blue Ribbon Panel or decisions issued in Rulemaking 11-02-019. Therefore, PG&E shall file a Compliance Filing in these dockets, which:

1. Identifies the remedies ordered in this decision that have already been ordered elsewhere, where that remedy (decision, report,

¹ This amount would consist of the \$1,350,000,000 fines and disallowances adopted in this decision and \$635,000,000 in disallowances adopted in Decision 12-12-030 in R.11-02-019, in addition to approximately \$50,000,000 to implement the adopted remedies (such as funds for CPSD to hire independent auditors and experts and to reimburse CPSD and Intervenors for their reasonable litigation expenses).

etc.) was ordered, and PG&E's progress to date in complying with that remedy.

2. Identifies any remedy ordered in this decision that modifies or eliminates any remedies ordered elsewhere.

The Compliance Filing shall also include a timeframe for completion of each of the remedies adopted in Appendix E of this decision. This Compliance Filing shall be filed within 60 days of the date this decision is issued.

Investigation (I.) 12-01-007, I.11-02-016 and I.11-11-009 remain open to consider the July 28, 2014 motion filed by the City of San Bruno. In that motion, the City of San Bruno asserts that PG&E violated Rule 8.3(b) of the Commission's Rules of Practice and Procedure.

2. Background

On September 9, 2010, a 30-inch diameter segment of a natural gas transmission pipeline owned and operated by Pacific Gas and Electric Company (PG&E) ruptured in a residential area in San Bruno, California. In the months following the explosion, the Commission opened the following investigations into PG&E operations and practices:

- Investigation (I.) 11-02-016 (Recordkeeping OII) – The Commission's investigation into whether PG&E violated any provision or provisions of the California Public Utilities Code, Commission general orders or decisions, or other applicable rules or requirements pertaining to safety recordkeeping for its gas service and facilities.
- I.11-11-009 (Class Location OII) – The Commission's investigation into whether any of PG&E's operations and practices of its natural gas transmission pipeline system in locations with higher population density were in violation of state or federal statutes and regulations or Commission rules, general orders or decisions.

- I.12-01-007 (San Bruno OII) – The Commission’s investigation into whether PG&E violated any state or federal statutes or Commission orders in connection with the San Bruno explosion.²

Due to the overlap of witnesses and issues among the Pipeline OIIs, the assigned Administrative Law Judges (ALJs) coordinated hearing and briefing schedules as needed. On September 7, 2012, the Safety and Enforcement Division (CPSD)³ filed two coordinated motions in the Pipeline OIIs seeking leave to serve additional prepared testimony regarding PG&E’s financial resources and permission to file a single coordinated brief regarding fines and remedies. The two motions were granted on September 25, 2012. As noted in that ruling, a coordinated brief on fines and remedies would benefit the decisionmaking process, as the Commission could then consider CPSD’s recommendations in a comprehensive manner.⁴

CPSD served *Financial Analysis of PG&E Corporation (Overland Report)* on September 7, 2012.⁵ The date for intervenors to serve financial testimony was December 17, 2012. No intervenor testimony was served. PG&E served its

² Together, the three OIIs are referred to as the “Pipeline OIIs”. In addition to the Pipeline OIIs, the Commission also opened Rulemaking (R.) 11-02-019 to adopt new safety and reliability programs for natural gas transmission and distribution pipelines.

³ Prior to January 1, 2013, the Safety and Enforcement Division had been called the Consumer Protection and Safety Division (CPSD). However, for consistency and to avoid confusion, this Decision continues to refer to the Safety and Enforcement Division by its former name, CPSD.

⁴ *Administrative Law Judges’ Ruling Granting Motions of Consumer Protection and Safety Division for Leave to Serve Additional Prepared Testimony and for Permission to File a Single Coordinated Brief Regarding Fines and Remedies and Notice of Hearing*, filed September 25, 2012, at 2-3.

⁵ The confidential version of the *Overland Report* is Exh. JOINT-50; the public version of the *Overland Report* is Exh. JOINT-51.

rebuttal testimony, *Wells Fargo Report*, on January 11, 2013.⁶ CPSD served *Rebuttal by Overland Consulting to Report by Wells Fargo Securities (Overland Rebuttal)* on February 8, 2013.⁷

Evidentiary hearings on fines and remedies were held on March 4 and 5, 2013. Opening briefs were filed on May 6, 2013 by CPSD, the Division of Ratepayer Advocates (DRA);⁸ the City of San Bruno (CSB); The Utility Reform Network (TURN); and the City and County of San Francisco (CCSF).⁹ PG&E filed its response on May 24, 2013.¹⁰ On June 5, 2013, CPSD filed its reply brief; DRA, TURN, CCSF and CSB filed their reply briefs on June 7, 2013.

On July 8, 2013, CPSD filed a motion for permission to file an amended reply brief. CPSD's motion was granted on July 12, 2013 in an electronic ruling, which also provided for a round of response/rebuttal briefs. CPSD filed its amended reply brief (*CPSD Amended Reply*) on July 16, 2013. PG&E filed its response to the *CPSD Amended Reply* on August 21, 2013. Rebuttal briefs to PG&E's August 21st response were filed on August 28, 2013 by CPSD, TURN,

⁶ The confidential version of the *Wells Fargo Report* is Exh. JOINT-66; the public version is JOINT-67.

⁷ The confidential version of the *Overland Rebuttal* is Exh. JOINT-53; the public version is JOINT-54.

⁸ The Division of Ratepayer Advocates (DRA) was renamed the Office of Ratepayer Advocates (ORA) effective September 26, 2013, pursuant to Senate Bill 96. However, for consistency and to avoid confusion, this Decision continues to refer to ORA by its former name, DRA.

⁹ DRA, TURN, CSB and CCSF are jointly referred to as "Intervenors."

¹⁰ Pursuant to an ALJ Ruling issued on June 3, 2013, PG&E filed an amended brief on June 5, 2013.

DRA, CCSF, CSB and the Californians for Renewable Energy (CARE).¹¹ Table 1 below summarizes the penalty proposals.

TABLE 1
Penalty Proposals

Party	Fine to be Paid to General Fund	Other Disallowances/Remedies
CPSD ¹²	Minimum \$300 million	<ul style="list-style-type: none"> - \$435 million disallowance for shareholders from D.12-12-030 - \$1.515 billion for payment of ratepayers' share of Pipeline Safety Enhancement Plan (PSEP) Phase I costs, with any remaining amounts to pay for the ratepayers' share of PSEP Phase II costs.¹³ - Specific remedies to address violations in each proceeding
DRA ¹⁴	\$550 million	<ul style="list-style-type: none"> - Shareholders responsible for all approved costs of Phase I of the PSEP, including the \$1.169 million approved in D.12-12-030 - Hire independent monitor - Implement NTSB recommendation regarding comprehensive audit of all aspects of PG&E's operations
TURN ¹⁵	\$670 million	<ul style="list-style-type: none"> - \$785 million already or to be paid

¹¹ CARE is a party in only the Recordkeeping OII.

¹² *Amended Reply Brief of the Consumer Protection and Safety Division on Fines and Remedies (CPSD Amended Reply)*, filed July 16, 2013, at 4.

¹³ The PSEP was adopted in Decision (D.) 12-12-030, *Decision Mandating Pipeline Safety Implementation Plan, Disallowing Costs, Allocating Risk of Inefficient Construction Management to Shareholders, and Requiring Ongoing Improvement in Safety Engineering*.

¹⁴ *Opening Brief of the Division of Ratepayer Advocates Regarding Fines and Remedies (DRA Opening Brief)*, filed May 6, 2013, at 4-5.

		<p>by PG&E shareholders for PSIP work ordered in D.12-12-030</p> <ul style="list-style-type: none"> - \$1.0 billion of PSIP costs apportioned to PG&E’s ratepayers in D.12-12-030 (after-tax cost = \$740 million) - \$50 million associated with proposed remedies - Centralized database on reused pipeline - PG&E should pay costs for independent auditor
CSB ¹⁶	\$900 million	<ul style="list-style-type: none"> - Require \$2.333 billion in PSEP investments be made at shareholder expense - Appoint Independent Monitor - \$100 million to establish and fund California Pipeline Safety Trust - \$150 million to establish and fund Peninsula Emergency Response Fund - Require memorandum of understanding (MOU) with city, county and fire districts regarding emergency response role - Direct PG&E to undertake automated safety value pilot program - Direct PG&E to modify incentive

¹⁵ *Opening Brief of The Utility Reform Network on Fines and Remedies (TURN Opening Brief)*, filed May 6, 2013, at viii – x.

¹⁶ *Rebuttal Brief of the City of San Bruno Concerning the Fines and Remedies to be Imposed on Pacific Gas and Electric Company (CSB Rebuttal Brief)*, filed June 7, 2013, at 7-8. In its opening brief, CSB had proposed a fine amount of \$1.25 billion fine to be paid to the State’s General Fund and various remedies. (*Opening Brief of the City of San Bruno Concerning the Fines and Remedies to be Imposed on Pacific Gas and Electric Company (CSB Opening Brief)*, filed May 6 2014, at 7.) In its rebuttal brief, CSB updated its penalty proposal to “support, oppose or respond to specific proposals” advanced by CPSD, TURN, DRA, CCSF and PG&E in their opening briefs on fines and remedies, and by CPSD in its rebuttal brief. (*CSB Rebuttal Brief* at 6.)

		structure.
CCSF ¹⁷	Total amount of at least \$2.25 billion. No allocation between fines and disallowances, but advocates that a large portion should be directed to remedial measures proposed by CSB, DRA and TURN.	

On July 30, 2013, the ALJs issued a ruling requesting additional comment in the following areas:

1. PG&E was asked to respond to various questions concerning how it would treat any fines or disallowances. (Section 3 Questions)
2. All parties were asked to respond to various questions concerning “the impact that fines and disallowances would have on PG&E’s ability to raise capital and otherwise remain financially viable, including the tax treatment of amounts disallowed.”¹⁸ (Section 4 Questions)

PG&E filed its response to the Section 3 Questions on August 21, 2013.¹⁹ Responses to the Section 4 Questions were filed on September 20, 2013 by CPSD, PG&E, TURN and CSB.²⁰ Replies to those responses were filed on October 15, 2013 by CPSD, PG&E, and TURN.

¹⁷ *Opening Brief of the City and County of San Francisco on Penalties (CCSF Opening Brief)*, filed May 6, 2013, at 15-17 & 47-50.

¹⁸ *Administrative Law Judges’ Ruling Requesting Additional Comment*, filed July 30, 2013, at 4.

¹⁹ Pursuant to an ALJ Ruling issued on September 16, 2013, PG&E filed an amended response on September 17, 2013.

²⁰ Pursuant to an ALJ Ruling issued on October 9, 2013, PG&E and CSB filed amended responses on October 11, 2013.

On _____, the Commission issued decisions on violations associated with the three investigations – Decision (D.) 14-XX-XXX (*San Bruno Violations Decision*), D. 14-XX-XXX (*Recordkeeping Violations Decision*) and D. 14-XX-XXX (*Class Location Violations Decision*). The violations found in these three decisions form the basis for our consideration of the penalties to be imposed.

3. Summary of Violations

In the decisions on violations, we found that PG&E committed a total of 3,710 violations of various provisions of Part 192 of Title 49 of the Code of Federal Regulations (CFR), Pub. Util. Code § 451, American Society of Mechanical Engineers Standard B.31.8 (ASME B.31.8) (and its subsequent revisions), General Order (GO) 112 (and its subsequent revisions), and Rule 1.1 of the Commission’s Rules of Practice and Procedure. These violations are summarized below.

3.1. San Bruno Violations Decision (I.12-01-007)

In the *San Bruno Violations Decision*, we found PG&E had committed 32 violations, many of them continuing for years, and a total of 59,255 separate offenses. These violations are:

1. PG&E violated Section 841.412(c) of ASME B31.1.8-1955 by not conducting a hydrostatic test on Segment 180 post-installation, creating an unsafe system in violation of Pub. Util. Code § 451. This violation began in 1956 and, because PG&E did not subsequently conduct a hydrostatic test, continued to September 9, 2010.
2. By failing to visually inspect for and discover the defects in Segment 180, PG&E violated Section 811.27(A) of ASME B31.1.8-1955, creating an unsafe system in violation of Pub. Util. Code § 451. This violation occurred in 1956.
3. By installing pipe sections in Segment 180 that were less than 5 feet in length, PG&E violated API 5LX Section VI, creating an

- unsafe system in violation of Pub. Util. Code § 451. This violation occurred in 1956.
4. By assigning a yield strength value for Segment 180 above 24,000 psi when the yield strength was actually unknown, PG&E violated Section 811.27(G) of ASME B31.1.8-1955, creating an unsafe system in violation of Pub. Util. Code § 451. This violation occurred in 1956.
 5. By not completely welding the inside of the longitudinal seams on pups 1, 2, and 3 of Segment 180 and failing to measure the wall thickness to ensure compliance with the procurement orders which required 0.375-inch wall thickness, PG&E violated Section 811.27(C) of ASME B31.1.8-1955, creating an unsafe system in violation of Pub. Util. Code § 451. This violation occurred in 1956.
 6. By welding the pups in a deficient manner such that the girth welds contained incomplete fusion, burnthrough, slag inclusions, cracks, undercuts, excess reinforcement, porosity defects, and lack of penetration, PG&E violated Section 1.7 of API standard 1104 (4th edition, 1956), creating an unsafe system in violation of Pub. Util. Code § 451. This violation occurred in 1956.
 7. By failing to properly account for the actual conditions, characteristics, and specifications of the Segment 180 pups when it established the MAOP of 400 psig for Segment 180, PG&E failed to comply with the maximum allowable operating pressure (MAOP) determination requirements in Section 845.22 of ASME B31.1.8-1955. PG&E therefore created an unsafe system condition in violation of Pub. Util. Code § 451. This violation occurred in 1956.
 8. By installing pipeline sections in Segment 180 out of compliance with industry standards and transmission pipe specifications, and not suitable or safe for the conditions under which they were used, contrary to Section 810.1 of ASME B31.1.8-1955, PG&E created an unreasonably unsafe system in violation of Pub. Util. Code § 451. Because the unsafe condition remained uncorrected, this violation continued from 1956 to September 9, 2010.
 9. PG&E violated ASME-B31.8S Appendix A, Section 4.2, and 49 CFR 192.917(b), by failing to use conservative assumptions

- where PG&E was missing important pipeline data such as pipe material, manufacturing process, and seam type. This violation continued from December 17, 2004 to September 9, 2010.
10. PG&E violated 49 CFR 192.917(b), by not adequately gathering and integrating required pipeline data, thereby not having an adequate understanding of the threats on Line 132. This violation continued from December 17, 2004 to September 9, 2010.
 11. PG&E's failure to analyze the data on pipeline weld defects resulted in an incomplete understanding of the manufacturing threats to Line 132, in violation of 49 CFR 192.917(a) and ASME-B31.8S Section 2.2. This violation continued from December 17, 2004 to September 9, 2010.
 12. PG&E violated 49 CFR 192.917(e)(2), by failing to consider and test for the threat of cyclic fatigue on Segment 180. This violation continued from December 17, 2004 to September 9, 2010.
 13. As a result of ignoring the category of Double Submerged Arc Welded (DSAW) as one of the weld types potentially subject to manufacturing defects, PG&E failed to determine the risk of failure from this defect in violation of 49 CFR 192.917(e)(3). This violation continued from December 17, 2004 to September 9, 2010.
 14. PG&E violated 49 CFR 192.917(e)(3) by not considering manufacturing and construction defects on Line 132 unstable and prioritizing the covered segments as high risk for the baseline assessment or a subsequent reassessment, and thereby failing to determine the risk of failure from manufacturing and construction defects of Line 132 after operating pressure increased above the maximum operating pressure experienced during the preceding five years. This violation continued from December 17, 2004 to September 9, 2010.
 15. By not performing pipeline inspections using a method capable of detecting seam issues, PG&E violated 49 CFR 192.921(a). This violation continued from December 17, 2004 to September 9, 2010.

16. PG&E violated 49 CFR 192.917(c) and ASME-B31.8S Section 5, by using risk ranking algorithms that did not: (1) properly weigh the threats to Line 132, because PG&E did not include its actual operating experience; (2) properly identify the Potential Impact Radius of a rupture, by using a value of 300 feet where the PIR is less than that; (3) identify the proper Consequence of Failure formula, by not accounting for higher population densities; (4) use conservative values for electrical interference on Line 132, which created an external corrosion threat; (5) include any consideration of one -call tickets, which indicates third party damage threats; (6) include any consideration of historic problems with the type of pipe used on Segment 180. This violation continued from December 17, 2004 to September 9, 2010.
17. PG&E violated Pub. Util. Code § 451 by engaging in the practice of increasing the pressure on Line 132 every 5 years to set the MAOP for the purpose of eliminating the need to deem manufacturing and construction threats unstable, thereby avoiding the need to conduct hydrostatic testing or in-line inspections on Line 132. This violation continued from December 17, 2004 to September 9, 2010.
18. PG&E violated 49 CFR 192.13(c), by failing to follow its internal work procedures that are required to be established under 49 CFR 192. This violation occurred on September 9, 2010.
19. By failing to follow its work procedures on September 9, 2010, PG&E created an unreasonably dangerous condition in violation of Pub. Util. Code § 451. This violation occurred on September 9, 2010.
20. PG&E violated 49 CFR 192.605(c), by failing to establish adequate written procedures for maintenance and operations activities under abnormal conditions. This violation occurred on September 9, 2010.
21. PG&E created an unreasonably unsafe system in violation of Pub. Util. Code § 451, by poorly maintaining a system at Milpitas that had defective electrical connections, improperly labeled circuits, missing wire identification labels, aging and obsolete

- equipment, and inaccurate documentation. This violation continued from February 28, 2010 to September 9, 2010.
22. PG&E's slow and uncoordinated response to the explosion violates the requirement of 49 CFR 192.615(a)(3) for an operator to respond promptly and effectively to an emergency. This violation occurred on September 9, 2010.
 23. PG&E did not adequately receive, identify, and classify notices of the emergency, in violation of 49 CFR 192.615(a)(1). This violation occurred on September 9, 2010.
 24. PG&E did not provide for the proper personnel, equipment, tools and materials at the scene of an emergency, in violation of 49 CFR 192.615(a)(4). This violation occurred on September 9, 2010.
 25. PG&E's efforts to perform an emergency shutdown of its pipeline were inadequate to minimize hazards to life or property, in violation of 49 CFR 192.615(a)(6). This violation occurred on September 9, 2010.
 26. Rather than make safe any actual or potential hazards to life or property, PG&E's response made the hazards worse, in violation of 49 CFR 192.615(a)(7). This violation occurred on September 9, 2010.
 27. PG&E's failure to notify the appropriate first responders of an emergency and coordinate with them violated 49 CFR 192.615(a)(8). It is clear that PG&E's emergency plans were ineffective, and were not followed. This violation occurred on September 9, 2010.
 28. PG&E violated 49 CFR 192.605(c)(1) and (3) by failing to have an emergency manual that properly directed its employees to respond to and correct the cause of Line 132's decrease in pressure, and its malfunction which resulted in hazards to persons and property, and notify the responsible personnel when notice of an abnormal operation is received. This violation occurred on September 9, 2010.
 29. PG&E failed to establish and maintain adequate means of communication with the appropriate fire, police and other public officials, in violation of 49 CFR 192.615(a)(2). This violation occurred on September 9, 2010.

30. PG&E violated 49 CFR 199.225(a), by failing to perform alcohol tests on the employees involved within 2 hours of the incident, and failing to record the reasons for not administering the test in a timely fashion. This violation occurred on September 9, 2010.
31. PG&E's failure to create and follow good emergency plans created an unreasonably unsafe system in violation of Pub. Util. Code § 451. This violation occurred on September 9, 2010.
32. PG&E created an unreasonably unsafe system in violation of Pub. Util. Code § 451, by continuously cutting its safety-related budgets for its Gas Transmission and Storage (GT&S). This violation continued from January 1, 2008 to September 9, 2010.

3.2. Recordkeeping Violations Decision (I.11-02-016)

In the *Recordkeeping Violations Decision*, we found that PG&E committed 33 violations, many of them continuing for years, for a total of 350,189 days in violation. These violations are:

1. PG&E's lack of accurate and sufficient records to determine whether it had used salvaged pipe in Segment 180 impacted its ability to safely maintain and operate this segment in violation of Pub. Util. Code § 451. (Felts Violation 1) This violation ran from 1956 to September 9, 2010.
2. PG&E violated Pub. Util. Code § 451 for failing to retain the necessary design and construction records in Job File GM 136471 for the construction of Segment 180. (Felts Violation 2) This violation ran from 1956 to September 9, 2010.
3. PG&E violated ASME B.31.8 § 841 and Pub. Util. Code § 451 for failing to perform a post-installation pressure test on Segment 180 and retaining the record of that test for the life of the facility. (Felts Violation 3) This violation ran from 1956 to September 9, 2010.
4. PG&E violated Pub. Util. Code § 451 by increasing the MAOP of Line 132 from 390 psi to 400 psi without conducting a hydrostatic test. (Felts Violation 4) This violation ran from December 10, 2003 to September 9, 2010.

5. PG&E violated Pub. Util. Code § 451 by operating Line 132 above 390 psi on December 11, 2003, December 9, 2008 and September 9, 2010 without having records to substantiate the higher operating pressure. (Felts Violation 11) These constitute three separate violations. The first violation ran from December 11, 2003 to September 9, 2010; the second violation ran from December 9, 2008 to September 9, 2010; and the final violation occurred on September 9, 2010.
6. PG&E violated Pub. Util. Code § 451 by failing to provide the proper clearance procedures for work performed at the Milpitas Terminal on September 9, 2010. (Felts Violation 5) This violation ran from August 27, 2010 to September 9, 2010.
7. PG&E violated Pub. Util. Code § 451 by failing to have accurate drawings and computer diagrams of the Milpitas Terminal. (Felts Violation 7) This violation ran from December 2, 2009 to July 2011.
8. PG&E violated Pub. Util. Code § 451 by failing to have accurate Supervisory Control and Data Acquisition System (SCADA) diagrams. (Felts Violation 7 and 9) This violation ran from December 2, 2009 to October 27, 2010.
9. PG&E violated Pub. Util. Code § 451 by failing to have the necessary backup software readily available at the Milpitas Terminal on September 9, 2010. (Felts Violation 8) This violation occurred on September 9, 2010.
10. PG&E's October 10, 2011 data response about the video recording for Camera 6 misled Commission staff and impeded their investigation into the San Bruno explosion. (Felts Violation 13) This is a violation of Rule 1.1 of the Commission's Rules of Practice and Procedure.
11. PG&E violated Rule 1.1 by misleading CPSD in two separate data responses regarding personnel present at the Milpitas Terminal who were working on the pressure problem on September 9, 2010. (Felts Violation 14) The first violation occurred on October 10, 2011, PG&E's response to DR 30, Q 8.d; the second violation occurred on December 17, 2011, PG&E's response to DR 30, Q 2. Both violations ran until January 15, 2012.

12. PG&E's recordkeeping practices with respect to Job Files adversely impacts its ability to operate its gas transmission pipeline system in a safe manner and violates Pub. Util. Code § 451. (Felts Violation 16) This violation ran from 1987 to December 12, 2012.
13. PG&E has failed to retain pressure test records for all segments of its gas transmission pipeline system as required by Pub. Util. Code § 451, ASME B.31.8, GO 112 through 112-B and PG&E's internal records retention policies. (Felts Violation 18) This violation ran from 1956 through December 20, 2012.
14. PG&E violated ASME B.31.8 § 828.2, GO 112 through 112-B § 206.1, 49 CFR 192.241 and 192.243 and PG&E's Standard Practice 1605 by failing to retain weld inspection reports. (Felts Violation 19) This violation ran from 1955 through December 20, 2012.
15. PG&E violated Pub. Util. Code § 451 for failing to maintain records necessary to ensure the safe operations of its gas transmission pipeline system by failing to create and retain operating pressure records over the life of the pipe. (Felts Violation 20) This violation ran from 1955 to December 17, 2004.
16. Starting in 1955, inaccurate and incomplete data in PG&E's leak reports would prevent PG&E from operating its gas transmission pipeline system safely, as required by Pub. Util. Code § 451. (Felts Violations 21 and 22) This violation ran from 1955 to December 20, 2012.
17. PG&E violated Pub. Util. Code § 451 by failing to retain records of reconditioned and reused pipe in its transmission pipeline system. (Felts Violation 23) This violation ran from 1940 to December 20, 2012.
18. PG&E violated Pub. Util. Code § 451 by failing to ensure the accuracy of data in its Geographic Information System (GIS) system and assuming values for missing data that were not conservative. (Felts Violation 24) This violation ran from 1995 to December 20, 2012.
19. PG&E violated Pub. Util. Code § 451 because its ability to assess the integrity of its pipeline system and effectively manage risk is

- compromised by the availability and accuracy of its pipeline data. (Felts Violation 25) This Violation ran from December 17, 2004 to December 20, 2012.
20. PG&E violated Pub. Util. Code § 451 for failing to retain a metallurgist report concerning a 1963 fire and explosion on Line 109 caused by a failure in a circumferential weld. (Felts Violation 27) This violation ran from 1963 to December 20, 2012.
 21. The shortcomings in PG&E's records management activities has resulted in PG&E's inability to operate and maintain PG&E's gas transmission line in a safe manner and violate Pub. Util. Code § 451; GO 112 through 112-B, Section 107; ASME B.31.8. (Duller/North Violation A.1) This violation ran from 1955 to December 20, 2012.
 22. PG&E violated ASME B.31.8 § 851.5 by failing to retain records of Leak Survey Maps for as long as the line remains in service. (Duller/North Violation B.1) This violation ran from April 16, 2010 to December 20, 2012.
 23. PG&E violated ASME B.31.8 § 851.5 by failing to retain records of Line Patrol Reports for as long as the line remains in service. (Duller/North Violation B.2) This violation ran from September 1, 1964 to December 20, 2012.
 24. PG&E violated ASME B.31.8 § 851.5 by failing to retain records of Line Inspection Reports as long as the line remains in service. (Duller/North Violation B.3) This violation ran from December 17, 1991 to December 20, 2012.
 25. PG&E violated ASME B.31.8 § 851.417 by failing to retain pressure test records for the useful life of the pipeline. (Duller/North Violation B.4) This violation ran from September 1, 1964 to December 20, 2012.
 26. PG&E violated ASME B.31.8 § 851.5 by failing to retain records of transmission line inspections for as long as the line remains in service. (Duller/North Violation B.5) This violation ran from September 1, 1964 to December 20, 2012.
 27. PG&E violated 49 CFR 192.13(c) for failing to comply with its internal records retention policies. (Duller/North Violation B.6) This violation ran from 1955 to December 20, 2012.

28. PG&E violated Pub. Util. Code § 451 by failing to identify and include in the Gas Pipeline Replacement Plan (GPRP) all pipe segments with unusual longitudinal seams and joints. (Duller/North Violation C.1) This violation ran from June 1988 to December 20, 2012.
29. PG&E violated Pub. Util. Code § 451 because missing and inaccurate pipeline records prevented PG&E from properly identifying and replacing those pipelines that were prone to damage during severe earthquakes. (Duller/North Violation C.2) This violation ran from June 1992 to December 20, 2012.
30. PG&E violated Pub. Util. Code § 451 for failing to maintain a definitive, complete and readily accessible database of all gas leaks for their pipeline system. (Duller/North Violation C.3) This violation ran from 1957 to December 20, 2012.

3.3. Class Location Violations Decision (I.11-11-009)

In the *Class Location Violations Decision*, we found that PG&E committed 3,643 violations that continued for years, for a total of 18,038,359 days in violation. These violations are:

1. PG&E failed to maintain or operate all segments of its transmission pipeline system at the proper class location. Based on PG&E's acknowledgement that it is responsible for maintaining complete, up-to-date class locations for its entire gas transmission system, and that that it has failed to do so, we find that PG&E has violated the following Federal Regulations:
 - a. PG&E violated its own internal rules by failing to identify 843 segments with increased population density. This constitutes a violation of 49 CFR 192.13(c).
 - b. PG&E failed to identify changes in population density and misclassified 224 pipeline segments. As a result, PG&E failed to conduct a study to determine the actual class location of these pipeline segments in violation of 49 CFR 192.609.
 - c. Due to misclassification of 224 pipeline segments, PG&E did not confirm or revise the MAOP of segments with

changed class designations within 24 months of the change in class location. This failure is a violation of 49 CFR 192.611.

- d. PG&E violated 49 CFR 192.613 by not having a procedure for continuing surveillance of its facilities to determine and take appropriate action concerning, among other things, changes in class location, for 677 segments.
 - e. PG&E violated 49 CFR 192.619 by operating 63 pipe segments at pressures greater than allowed for the current class location.
2. PG&E violated 49 CFR 192.107 by using an assumed Specified Minimum Yield Strength (SMYS) value above 24,000 psi for 133 segments of pipe that moved to a higher class designation when those segments did not have sufficient known pipe attributes to support an assumed value over 24,000 psi.
 3. By operating 63 pipe segments at pressures greater than allowed for the current class designation and 133 segments with an assumed SMYS value above 24,000 psi, PG&E subjected pipelines to higher stresses and lower safety margins than allowed by federal and state safety regulations. PG&E's operation of these pipeline segments at excessive MAOPs constitute unsafe operations and is a violation of Pub. Util. Code § 451.

3.4. Alleged Duplication of Violations

In its briefs on violations in the San Bruno OII and the Recordkeeping OII, PG&E contends that there is substantial overlap of violations.²¹ PG&E raises this same argument again, contending that in the Pipeline OIIs, CPSD has alleged the

²¹ The *Reply Brief of Pacific Gas and Electric Company*, filed April 25, 2013 in I.12-01-007, discussed duplication and/or overlap of alleged violations at 2, 6, 83, 89, 90, 98, 159, and Appendixes D and E; *Reply Brief of Pacific Gas and Electric Company*, filed August 24, 2013 in I.11-02-016, at 29-30.

same violation or violations arising out of the same conduct.²² Among other things, PG&E contends that CPSD alleged the same violation in both the San Bruno OII and the Recordkeeping OII concerning PG&E's SCADA system, emergency response plans and GIS data, and that CPSD alleged in all three OIIs that PG&E had improperly used assumed SMYS values above 24,000 psi. PG&E asserts that since these alleged violations concern the same conduct, they cannot be considered separate violations.

We agree with PG&E that to the extent the three OIIs allege the same violations, these violations should not be counted multiple times. However, the fact that PG&E's actions resulted in violations of multiple regulations and statutes does not constitute duplicative or overlapping violations. Failure to comply with each of these regulations would constitute a separate violation. In the Pipeline OIIs, CPSD has explained the applicable statute that serves as the basis of each violation and the acts supporting the alleged violation.

PG&E has alleged the following duplicative and overlapping alleged violations among the three OIIs:²³

- 1. Assumed SMYS values greater than 24,000 psi (alleged San Bruno violations 8 & 14, alleged Recordkeeping violation 24 (Felts Violation 24) and alleged Class Location violation 1) –** Alleged San Bruno violation 8 concerns the assumed SMYS value for Segment 180, while alleged Class Location violation 1 concerns the assumed SMYS value for 133 pipeline segments of pipe that moved to a higher class designation when those segments did not have sufficient known pipe attributes. Since the segments identified in the Class Location OII do not include

²² *Coordinated Remedies Brief of Pacific Gas and Electric Company (PG&E Remedies Brief)*, filed May 24, 2013 and amended June 5, 2013, at 39.

²³ *PG&E Remedies Brief* at 39.

Segment 180, there is no duplication or overlap. Similarly, Felts Violation 24 concerns incorrect data in survey sheets and GIS, which is not a factor in alleged San Bruno violation 8 or Class Location violation 1. Finally, alleged San Bruno violation 14 was not adopted. For the reasons discussed here, there was no duplication in alleged violations regarding assumed SMYS values.

2. **Hydrostatic Testing on Segment 180 (alleged San Bruno violation 4 and Recordkeeping violation 3 (Felts Violation 3))** – Alleged San Bruno violation 4 concerns a continuing violation of Pub. Util. Code § 451 from 1956 to 2010 for not conducting a hydrostatic test on Segment 180, while Felts Violation 3 concerns failure to retain records. However, we believe there is substantial similarity between these two violations, with the major difference being that alleged San Bruno violation 4 does not address recordkeeping violations. As Felts Violation 3 is more inclusive for the purpose of determining fines and remedies, we will exclude the number of violations contained in alleged San Bruno violation 4 (adopted as San Bruno violation 1) from the total number of violations.
3. **Accounting for Segment 180 Pups in establishing MAOP (alleged San Bruno violations 12 and 13 and alleged Recordkeeping violation 4 (Felts Violation 4))** – The *San Bruno Violations Decision* agrees that alleged San Bruno violations 12 and 13 were duplicative, and adopted a single violation (adopted violation 7). Adopted San Bruno violation 7 found that PG&E violated ASME B.31.8 § 845.22, and therefore Pub. Util. Code § 451, by failing to account for the conditions, characteristics and specifications for the pups when it established an MAOP of 400 psi. This was a one-time violation in 1956. In contrast, Felts Violation 4 concerns PG&E increasing the MAOP for Line 132 from 390 psi to 400 psi in 2004 without first performing a hydrostatic test. Felts Violation 4 was a continuing violation running from 2004 to 2010. Given the different timeframes and focus of the two violations, there is no duplication.
4. **Clearance documentation (alleged San Bruno violations 29 and 30 and alleged Recordkeeping violation 5 (Felts Violation 5))** –

Alleged San Bruno violations 29 and 30 deal with PG&E's clearance procedures for the Milpitas Terminal work. The first is a violation of 49 C.F.R § 192.13(c), which PG&E does not contest. The second is the same facts, and resulted in a violation of Pub. Util. Code § 451. Felts Violation 5 concerns PG&E's failure to properly follow its clearance procedures, resulting in a violation of Pub. Util. Code § 451. Based on the facts presented, it appears that alleged San Bruno Violation 30 is included in Felts Violation 5. Therefore, we will exclude the number of violations contained in alleged San Bruno violation 30 (adopted as San Bruno violation 19) from the total number of violations.

5. **SCADA Inadequacy (alleged San Bruno violation 33 and alleged Recordkeeping violations 7 & 9 (Felts Violations 7 & 9))** – Alleged San Bruno violation 33 was not upheld in the *San Bruno Violations Decision*. Further, while the *Recordkeeping Violations Decision* had upheld Felts Violation 7, it had determined that Felts Violation 9 was not a separate violation. Accordingly, PG&E's assertions of duplication among these violations are moot.
6. **Emergency Procedures (alleged San Bruno violations 33-51 and alleged Recordkeeping violation 10 (Felts Violation 10))** – PG&E has not specified which of the alleged San Bruno violations are duplicative, nor the manner in which there is duplication. In any event, the *San Bruno Violations Decision* has rejected several of CPSD's alleged emergency response violations. Additionally, the *Recordkeeping Violations Decision* rejected Felts Violation 10. Accordingly, PG&E's assertions of duplication among these violations are moot.
7. **GIS Data (alleged San Bruno violations 15 & 16 and alleged Recordkeeping violations 24 & 25 (Felts Violations 24 & 25))** – Alleged San Bruno violation 15 concerns a violation of 49 CFR 192.917(b), while Felts Violations 24 and 25 concern violations of Pub. Util. Code § 451. Additionally, the *San Bruno Violations Decision* rejected alleged violation 16. As such, there is no duplication.
8. **Patrol Records (alleged Recordkeeping violation 30 (Duller/North Violation B.2) and alleged Class Location**

violation 6) – Alleged Class Location violation 6 concern violations of 49 CFR 192.605 and 192.709(c) for failing to adequately maintain pipeline patrol records. However, the *Class Location Violations Decision* specifically notes that the recordkeeping violations alleged in that proceeding were considered in the Recordkeeping OII.²⁴ Accordingly, PG&E’s assertions of duplication among these violations are moot.

4. Legal Framework for Fines and Remedies

The Commission has been certificated pursuant to 49 U.S.C. § 60105 to enforce the Department of Transportation’s minimum federal safety standards for gas pipeline facilities. In accordance with this authority, the Commission adopted General Order (GO) 112 governing natural gas pipeline safety. In 1971, the Commission revised GO 112 to adopt the federal pipeline safety rules in 49 CFR 192.²⁵ The current revision of this general order, GO 112-E, automatically incorporates all revisions to the Federal Pipeline Safety Regulations, 49 CFR 190, 191, 192, 193 and 199.²⁶ Consequently, the Commission may enforce violations of 49 CFR 192 pursuant to its constitutional and statutory authority.

4.1. Commission Authority to Impose Fines

The Commission’s authority to impose fines for violation of laws and regulations are established by Pub. Util. Code §§ 2107 and 2108. The

²⁴ *Class Location Violations Decision*, Section 6.

²⁵ See Recordkeeping Exh. PG&E-5 (D.78513, with GO 112-C attached).

²⁶ See Recordkeeping Exh. PG&E-7 (D.95-08-053, as modified by D.95-12-065, with GO 112-E attached).

Commission's authority to impose fines pursuant to Pub. Util. Code § 2107 has also been affirmed by the California Courts.²⁷

Section 2107 states:

Any public utility that violates or fails to comply with any provision of the Constitution of this state or of this part, or that fails or neglects to comply with any part or provision of any order, decision, decree, rule, direction, demand, or requirement of the commission, in a case in which a penalty has not otherwise been provided, is subject to a penalty of not less than five hundred dollars (\$500), nor more than fifty thousand dollars (\$50,000) for each offense.²⁸

Section 2108 states:

Every violation of the provisions of this part or of any part of any order, decision, decree, rule, direction, demand, or requirement of the commission, by any corporation or person is a separate and distinct offense, and in case of a continuing violation each day's continuance thereof shall be a separate and distinct offense.

There is disagreement between CPSD/Intervenors and PG&E over the use of fines or penalties imposed pursuant to these Code sections. CPSD and Intervenors all maintain that fines and penalties imposed under Pub. Util. Code §§ 2107 and 2108 must be paid to the General Fund.²⁹ PG&E, on the other hand,

²⁷ See, e.g., *Pacific Bell Wireless, LLC v. Public Utilities Com. (Cingular)* (2006) 140 Cal. App. 4th 718.

²⁸ Between 1994 and 2012, the maximum fine was \$20,000 per offense. Prior to 1994, the maximum fine was \$2,000 per offense.

²⁹ CPSD Amended Reply at 5; *Opening Brief of the City of San Bruno concerning the Fines and Remedies to be Imposed on Pacific Gas and Electric Company (CSB Opening Brief)*, filed May 6, 2013, at 8-9; *Opening Brief of the City and County of San Francisco on Penalties (CCSF Opening Brief)*, filed May 6, 2013, at 1; *Opening Brief of The Utility Reform Network on Fines and Remedies (TURN Opening Brief)*, filed May 6, 2013 at 3; *Opening Brief of the Division of Ratepayer Advocates Regarding Fines and Remedies (DRA Opening Brief)*, filed May 6, 2013, at 4.

argues that “[t]here is no requirement that [Public Utilities Code] Section 2107 penalties be paid to the General Fund and the Commission has authority under [Public Utilities Code] Section 701 to order that they be invested in pipeline safety.”^{30 31}

PG&E contends that CPSD and Intervenors incorrectly rely on Pub. Util. Code § 2104.5 and *Assembly v. Public Utilities Com.* (1995) 12 Cal. 4th 87 to support their assertion. PG&E states that although Pub. Util. Code § 2104.5 expressly requires payment of penalties to the General Fund, this requirement is the result of “a civil action in the name of the People of the State of California in the superior court.”³² It contends that since this is not “a case in which the state has recovered fines and penalties through an action in superior court in the name of the People,” Pub. Util. Code § 2104.5 does not apply.³³ PG&E further states that the *Assembly* court had referred to Pub. Util. Code § 2107 as “one of a number of penalty provisions that do not specify the use of the penalty funds . . .”³⁴

We agree with PG&E that the California Constitution, along with Pub. Util. Code § 701, confer broad authority on the Commission to regulate public utilities. However, contrary to PG&E’s arguments, we do not have discretion to

³⁰ *PG&E Remedies Brief* at 19.

³¹ Pub. Util. Code § 701 states:

The commission may supervise and regulate every public utility in the State and may do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction.

³² *PG&E Remedies Brief* at 20 (citing Pub. Util. Code § 2104.5, emphasis omitted).

³³ *PG&E Remedies Brief* at 20.

³⁴ *PG&E Remedies Brief* at 20.

direct how monies paid by a utility under Pub. Util. Code § 2107 are to be used. As articulated by the California Supreme Court: “Existing statutory requirements authorize such a penalty proceeding, but require that any penalty must be deposited in the General Fund.”³⁵

The *Cingular* Court held that the Commission has authority to impose fines and penalties on its own, without invoking the state’s judicial process. However, the Commission may invoke the judicial process pursuant to Pub. Util. Code § 2104³⁶ to recover unpaid fines and penalties.³⁷ Thus, as explained by the *Cingular* Court, Pub. Util. Code §§ 2104 and 2104.5 are collection statutes.³⁸

PG&E’s interpretation is not only contrary to our long-standing interpretation of Pub. Util. Code § 2107 but also flies in the face of the purpose of the penalties and fines. As we noted in *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates* (D.98-12-075) (1998) 84 Cal. P.U.C. 2d 155, 188:

The purpose of a fine is to go beyond restitution to the victim and to effectively deter further violations by this perpetrator or others. For this reason, fines are paid to the State of California, rather than to victims.

³⁵ *Assembly v. Public Utilities Com.*, 12 Cal. 4th at 102-103. The California Supreme Court further notes in footnote 10 of this decision: “The Commission on occasion has recognized that in accordance with the legislative policy expressed in sections 2100 and 2104, the penalties assessed under these provisions must be deposited in the General Fund.”

³⁶ Pub. Util. Code § 2104 is similar to Pub. Util. Code § 2104.5 in that both sections provide that the Commission may bring an action in Superior Court to collect fines or penalties for violations of statutory provisions, regulations or orders of the Commission, which shall than be paid to the credit of the General Fund. Section 2104.5 applies specifically to violations that involve safety standards for pipeline facilities or transportation of natural gas in California.

³⁷ *Pacific Bell Wireless, LLC v. Public Utilities Com.*, 140 Cal. App. 4th at 737.

³⁸ *Pacific Bell Wireless, LLC v. Public Utilities Com.*, 140 Cal. App. 4th at 737.

However, PG&E's proposal that all penalties be used invested in pipeline safety, while creating a windfall for ratepayers, would not effectively deter it from committing further violations. Indeed, such an outcome would not even be considered an appropriate penalty, since PG&E has always been required to invest in pipeline safety. Further, the only way such a "penalty" would be paid to the General Fund would be if PG&E failed to comply and the Commission initiated an action under Pub. Util. Code § 2104.5. Our conclusion is echoed by CSB, which states:

[F]ines are meant to punish and penalize, not reward the utility by increasing the rate base or reward ratepayers with a windfall. Anyone who violates the law and pays a fine pays it to the courts, and ultimately to the state. Why should this be any different?³⁹

Accordingly, we find PG&E's arguments without merit. We affirm our historical interpretation of Pub. Util. Code § 2107 that all penalties imposed under this code section are payable to the General Fund. We note, however, parties use the term "penalty" to refer to monies paid to the General Fund, as well as to refer to the combination of fines, disallowances and other remedies. To avoid further confusion in this decision, we refer to monies imposed under Pub. Util. Code § 2107 and paid to the General Fund as "fines", whereas the term "penalties" in this decision refers to the combination of fines, disallowances and remedies.

³⁹ CSB Opening Brief at 9.

4.2. Commission Authority to Impose Other Remedies

In addition to specific authority to impose fines pursuant to Pub. Util. Code §§ 2107 and 2108, the Commission has authority to fashion other equitable remedies. As applicable here, these remedies include exercising our ratemaking authority to disallow expenditures to correct deficiencies due to PG&E's failure to maintain its gas transmission pipeline system and records in accordance with applicable statutes, regulations and orders.

Pub. Util. Code § 451 confers general ratemaking authority upon the Commission and states:

All charges demanded or received by any public utility, or by any two or more public utilities, for any product or commodity furnished or to be furnished or any service rendered or to be rendered shall be just and reasonable. Every unjust or unreasonable charge demanded or received for such product or commodity or service is unlawful.

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.

All rules made by public utility affecting or pertaining to its charges or service to the public shall be just and reasonable.

In *Decision Mandating Pipeline Safety Implementation Plan, Disallowing Costs, Allocating Risk of Inefficient Construction Management to Shareholders, and Requiring Ongoing Improvement in Safety Engineering (PSEP Decision)* [D.12-12-030], the Commission adopted a PSEP for PG&E and authorized PG&E to increase its revenue requirements in 2012, 2013 and 2014 for these projects. However, the decision further noted:

Our upcoming decisions in Investigation (I.) 11-02-016, I.11-11-009 and I.12-01-007 will address potential penalties for PG&E's actions under investigation. We do not foreclose the possibility that further ratemaking adjustment may be adopted in those investigations; thus all ratemaking recovery authorized in today's decision is subject to refund.⁴⁰

This determination is reiterated in Ordering Paragraph 3 of the *PSEP Decision*.⁴¹ Thus, pursuant to our ratemaking authority under Pub. Util. Code § 451, along with the provision in the *PSEP Decision*, CPSD and Intervenors have urged that some or all of the PSEP costs authorized to be recovered from ratepayers be disallowed.⁴² DRA further argues, that even without these provisions "the Commission has equitable authority to exercise its ratemaking powers to disallow all further PSEP costs to the extent those costs fund activities that will redress the violations in these proceedings."⁴³

Additionally, TURN argues that PG&E's conduct should be considered imprudent because PG&E is "unable to foreclose the possibility that other dangerously defective segments are present in its system without testing or replacing all segments that lack a valid pressure test record."⁴⁴ It therefore contends that since the cost to test or replace pipeline is the result of this

⁴⁰ *PSEP Decision* at 4 (slip op.).

⁴¹ *PSEP Decision* at 126 (slip op.) ("All increases in revenue requirement authorized in Ordering Paragraph 2 are subject to refund pending further Commission decisions in Investigation (I.) 11-02-016, 1.11-11-009, and 1.12-01-007.").

⁴² *CPSD Amended Reply* at 4; *DRA Opening Brief* at 4; *TURN Opening Brief* at viii; *CSB Opening Brief* at 8; *CCSF Opening Brief* at 16-17.

⁴³ *DRA Opening Brief* at 16.

⁴⁴ *TURN Opening Brief* at 9.

imprudence, they should be disallowed from recovery under Pub. Util. Code §§ 451 and 463.⁴⁵

We agree that we have authority to require refunds for costs recovered from ratepayers pursuant to Pub. Util. Code § 451. In this instance, we may do so as an equitable remedy if warranted. Therefore, we do not need to reach the issue of disallowance due to imprudence under Pub. Util. Code § 463. In Section 6 of this decision, we address whether PG&E should be ordered to refund any PSEP costs authorized for rate recovery.

Finally, the Commission has broad authority under Pub. Util. Code § 701 to “do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient” in the supervision and regulation of public utilities.⁴⁶ However, the Commission’s exercise of these additional powers and jurisdiction “must be cognate and germane to the regulation of public utilities. . .”⁴⁷ In this instance, the remedies considered below are to ensure that PG&E’s gas transmission pipeline system will be maintained and operated safely. Accordingly, they lie squarely within our jurisdiction.

4.3. Proportionality and the Excessive Fines Clause

CPSD and Intervenors, with the exception of CARE, propose a combination of fines and disallowances and other remedies that would equal

⁴⁵ Pub. Util. Code § 463 requires the Commission to disallow direct and indirect expenses “reflecting the direct or indirect costs resulting from any unreasonable error or omission relating to the planning, construction, or operation of any portion of the corporation’s plant which cost, or is estimated to have cost, more than fifty million dollars (\$50,000,000), including any expenses resulting from delays caused by any unreasonable error or omission.”

⁴⁶ See, e.g., *Pacific Bell Wireless, LLC v. Public Utilities Com.*, 140 Cal. App. 4th at 736; *Consumers Lobby Against Monopolies v. Public Utilities Com. (CLAM)* (1979) 25 Cal. 3d 891, 905.

⁴⁷ *CLAM* 25 Cal. 3d at 905-906 (citations omitted).

approximately \$2.25 billion after tax. Their proposals are summarized in Table 1 above.

CARE states that no portion of the penalty should be in the form of a fine. Rather, it believes that the entire \$2.25 billion penalty should be directed to improve PG&E's pipeline system.⁴⁸ CARE further argues that "a penalty would not change PG&E's operations without an incentive to reduce the penalty, because there is nothing that PG&E can do to reduce the likelihood of new pipeline leaks except by replacing the old natural gas pipelines now in service."⁴⁹

We disagree with CARE's proposal that no fine be imposed under Pub. Util. Code §§ 2107 and 2108. As we note above, the purpose of a fine goes beyond restitution, as it is to deter PG&E and others from future violations. CARE's proposal appears to reward PG&E if it now performs the needed safety improvements that had been deferred. We do not see how such a penalty would serve to deter future violations.

PG&E argues that, in determining the level of penalties to be assessed, the Commission's ability to impose a fine is limited by the state and federal Excessive Fines Clauses.⁵⁰ Consequently, the Commission must consider the penalties assessed in other fatal pipeline accidents, not just penalties previously assessed by the Commission.⁵¹ PG&E identifies eight pipeline accidents

⁴⁸ *Californians for Renewable Energy Rebuttal to the Amended Reply Brief of the Consumer Protection and Safety Division*, filed August 26, 2013, at 6.

⁴⁹ *CARE Rebuttal to Amended Reply* at 5.

⁵⁰ *PG&E Remedies Brief* at 24; *Pacific Gas and Electric Company's Response to Consumer Protection and Safety Division's Amended Reply Brief on Fines and Remedies (PG&E Response to Amended Reply)*, filed August 21, 2013, at 8.

⁵¹ *PG&E Remedies Brief* at 24-25.

resulting in fatalities between 1999 and 2011 and notes that the amount proposed by CPSD and Intervenors is disproportionate to the penalties assessed in these prior accidents.⁵² Moreover, PG&E states that CPSD's proposal ignores the fact that other jurisdictions cap the level of penalties and argues that "other legislatures' determinations should weigh heavily" in analyzing whether the proposed penalty amount violates the Excessive Fines Clauses.⁵³

The Eighth Amendment to the United States Constitution states: "Excessive bail shall not be required, nor excessive fines imposed, nor cruel and unusual punishments inflicted." Similarly, Article 1, § 17 of the California Constitution prohibits "cruel or unusual punishment" and "excessive fines." In evaluating whether there is a violation of the Eighth Amendment, the U.S. Supreme Court stated:

The touchstone of the constitutional inquiry under the Excessive Fines Clause is the principle of proportionality: The amount of the forfeiture must bear some relationship to the gravity of the offense that it is designed to punish.⁵⁴

In *People ex rel. Lockyer v. R.J Reynolds Tobacco Company* (2005) 37 Cal. 4th 707, 728), the California Supreme Court noted that the principle of proportionality required the following four considerations: "(1) the defendant's culpability; (2) the relationship between the harm and the penalty; (3) the penalties imposed in similar statutes; and (4) the defendant's ability to pay." As noted by PG&E, these considerations are similar to those articulated in

⁵² *PG&E Remedies Brief* at 22 - 24.

⁵³ *PG&E Response to Amended Reply* at 9.

⁵⁴ *United States v. Bajakajian* (1998) 524 U.S. 321, 334.

D.98-12-075. However, PG&E argues that CPSD and Intervenors fail to consider comparable cases and statutes from other jurisdictions when setting the proposed penalty amount.⁵⁵ “Given that CPSD and Intervenors assert there has been no prior Commission enforcement action of comparable magnitude to these three OII proceedings, it is particularly important for the Commission to consider penalties imposed by court and other enforcement agencies in connection with natural gas pipeline accidents in other jurisdictions.”⁵⁶

PG&E asserts that the two most comparable fatal natural gas pipeline accidents are the natural gas pipeline rupture near Carlsbad, New Mexico in August 2000 and the gas line rupture and explosion in Allentown, Pennsylvania in February 2011. PG&E argues that the Carlsbad accident is comparable to San Bruno in size, scope and severity in the following areas: (1) twelve people died as a direct result of the rupture and resulting fire; (2) the National Transportation Safety Board (NTSB) had concluded that the failure was the result of the operator’s failure to prevent, detect, or control internal corrosion within the company’s pipeline; (3) the accident involved a large diameter transmission pipe installed in 1950, and there were concerns regarding the design and construction of the pipe; (4) as a result of the Carlsbad accident, there were changes to federal safety regulations that impacted the entire natural gas industry; and (5) the NTSB had determined that a contributing factor of the Carlsbad accident was the operator’s failure to monitor, investigate and mitigate internal corrosion in two of its pipelines transporting corrosive gas.⁵⁷ PG&E

⁵⁵ *PG&E Remedies Brief* at 24.

⁵⁶ *PG&E Remedies Brief* at 26.

⁵⁷ *PG&E Remedies Brief* at 27-29.

notes that “a U.S. District Court entered a consent decree in which El Paso Natural Gas Company agreed to pay \$101.5 million – consisting of a \$15.5 million civil penalty and \$86 million to implement program improvements.”⁵⁸ PG&E states that despite the parallels between the Carlsbad accident and the San Bruno explosion, CPSD’s proposed penalty is “approximately 20 times the penalty and other relief imposed for the Carlsbad accident.”⁵⁹

PG&E further contends that the February 2011 natural gas explosion in Allentown, Pennsylvania is “[a]nother case of reasonable comparable ‘size, scope and severity’.”⁶⁰ There, PG&E states: (1) there were five fatalities, three injuries and destruction of eight homes; (2) the cast-iron natural gas main was circumferentially fractured; (3) the utility had experienced numerous safety problems with its cast-iron gas mains in the past four years, yet had taken no remedial action; and (4) the Pennsylvania PUC enforcement staff had alleged numerous ongoing violations.⁶¹ The Pennsylvania PUC ultimately approved a settlement motion for a \$500,000 civil penalty and the utility agreed to not seek rate recovery for remedial measures estimated to cost \$24.75 million.⁶² PG&E states that CPSD’s proposed \$2.25 billion penalty is about 90 times larger than what had been imposed on UGI Corporation.⁶³ PG&E contends that in light of the similarities between the Carlsbad and Allentown accidents to San Bruno, the

⁵⁸ *PG&E Remedies Brief* at 29.

⁵⁹ *PG&E Remedies Brief* at 29.

⁶⁰ *PG&E Remedies Brief* at 30.

⁶¹ *PG&E Remedies Brief* at 30.

⁶² *PG&E Remedies Brief* at 30.

⁶³ *PG&E Remedies Brief* at 31.

disproportionate penalty proposed by CPSD and Intervenors raises constitutional concerns.⁶⁴

Finally, PG&E notes that CPSD's proposed recommendation not only exceeds the "largest penalty ever imposed", but also exceeds the statutory cap on penalties fixed by 48 other states and the District of Columbia.⁶⁵ As support, PG&E cites to *BMW of N. Am., Inc. v. Gore* (1996) 517 U.S. 559, 583-84 and *Hale v. Morgan* (1978) 22 Cal. 3d 388, 403 for the proposition that the constitutionality of a penalty must be considered in light of sanctions authorized in other states. It further notes that the proposed penalty "is almost five times the equity investment in PG&E's GT&S business in 2010 and almost as much as the total GT&S revenues for the nine years prior to the San Bruno accident."⁶⁶

We do not find PG&E's arguments that the Carlsbad and Allentown accidents are comparable to San Bruno to be compelling. Although we do not deny that there are some similarities between these two accidents and San Bruno, they fall well short of being comparable in size, scope and severity. Unlike Carlsbad and Allentown, the ruptured transmission pipeline in San Bruno caused "an explosion and lengthy fire in a major metropolitan area" and resulted in significantly more physical harm (eight fatalities, injuries to 58 others, destruction of 38 homes and damage to 70 other homes).⁶⁷ Additionally, as we have found in the *Recordkeeping Violations Decision* and the *Class Location Violations Decision*, PG&E committed "numerous violations of pipeline safety

⁶⁴ PG&E Remedies Brief at 32.

⁶⁵ PG&E Remedies Brief at 31; PG&E Response to Amended Reply at 9.

⁶⁶ PG&E Response to Amended Reply at 8-9.

⁶⁷ CPSD Amended Reply at 8.

regulations ... which were very lengthy in time and endangered many other high consequence areas in PG&E's service territory."⁶⁸ Moreover, PG&E chooses to ignore the fact that the penalties imposed on El Paso Natural Gas Company for the Carlsbad accident were the result of a consent decree. Similarly, UGI Corporation had settled the enforcement actions brought against it for the Allentown accident.⁶⁹ In contrast, PG&E has not settled any of the violations brought against it in the Pipeline OIIs. Based on these considerations, we conclude that any penalties imposed on PG&E in connection with the violations arising from the Pipeline OIIs should be significantly greater than those imposed on El Paso Natural Gas Company or UGI Corporation.

We also do not find PG&E's arguments that CPSD's proposed penalty amount exceeds the statutory cap on fines in most other jurisdictions to be compelling. We agree with CPSD that the fact that other states have capped the amounts allowed for violations "simply reflect other legislatures' prerogatives."⁷⁰ In *Gore*, the U.S. Supreme Court noted that in comparing penalties for comparable misconduct, a reviewing court should defer to "legislative judgments concerning appropriate sanctions for the conduct at issue."⁷¹ As a result, the Supreme Court found that the sanction imposed on BMW was substantially greater than the statutory fines available in Alabama and elsewhere

⁶⁸ *CPSD Amended Reply* at 8.

⁶⁹ Moreover, as noted by PG&E and CPSD, at the time of the Allentown accident, Pennsylvania law capped the civil penalty for accidents at \$500,000. Thus, the civil penalty imposed on UGI Corporation was limited to a maximum of \$500,000.

⁷⁰ *CPSD Amended Reply* at 9.

⁷¹ *Gore*, 517 U.S. at 583.

for similar misconduct.⁷² In this case, Pub. Util. Code §§ 2107 and 2108 authorize the Commission to impose a fine of “not less than five hundred dollars (\$500) nor more than fifty thousand dollars (\$50,000) for each offense”⁷³ and provides that for continuing violations, each day “shall be a separate and distinct offense.” Accordingly, unlike other jurisdictions, the California legislature has given the Commission broad discretion to determine the appropriate level of fines, rather than establish a maximum fine amount.

PG&E’s reliance on *Hale* is also misguided. In that case, the California Supreme Court considered whether a penalty imposed on the landlord of a small mobile home park pursuant to Civ. Code § 789.3 was excessive. Although the Court found it significant that no other jurisdiction appeared to have a mandatory daily penalty for a similar violation, it went on to state

The imposition of the \$100 daily penalty over a limited period may indeed, in a given case, be a perfectly legitimate means of encouraging compliance with law. Furthermore, there are doubtless some situations in which very large punitive assessments are both proportioned to the landlord’s misconduct and necessary to achieve the penalty’s deterrent purposes.⁷⁴

The Court then concluded that where “a penal statute may be subject to both constitutional and unconstitutional applications, courts evaluate the propriety of the sanction on a case-by-case basis.”⁷⁵ Based on the violations presented in the

⁷² *Gore*, 517 U.S. at 584.

⁷³ The maximum penalty of \$50,000 for each offense was effective January 1, 2012. Prior to January 1, 1994, the maximum penalty for each offense was \$2,000. Between January 1, 1994 and December 31, 2011, the maximum penalty for each offense was \$20,000.

⁷⁴ *Hale*, 22 Ca. 3d at 404.

⁷⁵ *Hale*, 22 Cal. 3d at 404.

Pipeline OIIs (e.g., the magnitude of the physical harm resulting from the San Bruno explosion, the potential risk to millions of residents from operating gas transmission pipelines at non-commensurate SMYS in areas of high population density, and PG&E's failure to have proper records to ensure safe operations of its natural gas transmission pipeline system), CPSD's proposed amount would not be considered excessive and may be necessary to deter future violations.

While we must consider penalties imposed in other fatal pipeline accidents and the level of penalties set by other jurisdictions, this factor does not control our analysis under the federal and state Excessive Fines Clauses. In *People ex rel. State Air Res. Bd. v. Wilmhurst* (1999) 68 Cal. App. 4th 1332, the State Attorney General had brought an action against defendants for violations of Cal. Health & Safety Code §§ 43150-43156, which resulted in a fine of \$45,000 against each defendant. In rejecting the defendants' arguments that the amount of the penalty imposed violated the Excessive Fines Clause, the California Court of Appeal, Third Appellate District, noted that while proportionality would be the most important issue in a forfeiture case, the defendant's ability to pay would be the critical factor when imposing a fine.⁷⁶ Consequently, the *Wilmhurst* Court concluded "The defendants' concern with the relationship between the amount of the fines and nature of their offenses or the amounts of fines imposed in other cases is consequently irrelevant; it is their ability to pay which is the

⁷⁶ *Wilmhurst*, 68 Cal. App. 4th at 1350 (citing *U.S. v. Hines* (8th Cir. 1996) 88 F.3d 661, 664).

constitutional lodestar.”⁷⁷ As we discuss in Section 5.3 below, we find that PG&E is financially able to bear the \$2.25 billion penalty proposed by CPSD.

Finally, as noted by DRA, the \$2.25 billion penalty proposed by CPSD and Intervenors is comprised of fines, disallowances and remedies, not a “civil penalty’ or ‘statutory penalty’ of the kind considered in the cases cited by PG&E.”⁷⁸ From that perspective, the fine amount proposed by CPSD and Intervenors under Pub. Util. Code §§ 2107 and 2108 (ranging from \$300 million to \$1.25 billion) would be well within the range of reason given PG&E’s size and the circumstances of these proceedings.

Moreover, as noted by CCSF, any proportionality assessment must consider “the extent to which a sanction is punitive in nature and ‘whether a penalty is grossly disproportional to the gravity of a defendant’s offense’...”⁷⁹ In this instance, CPSD is proposing a \$2.25 billion penalty for over 18.4 million violations. This would equate to approximately \$122 per violation, well below the statutory minimum fine specified in Pub. Util. Code § 2107. Consequently, while we do not dispute that CPSD’s proposed \$2.25 billion penalty is significant, we do not find that it violates the Excessive Fines Clause.

⁷⁷ *Wilmhurst*, 68 Cal. App. 4th at 1350. See also, *City and County of San Francisco v. Sainez* (2000) 77 Cal. App. 4th 1302, 1321 (“Other authority has since held, and we agree, that ‘in the case of fines, as opposed to forfeitures, the defendant’s ability to pay is a factor under the Excessive Fines Clause. [Citations.]’.”)

⁷⁸ *Rebuttal Brief of the Division of Ratepayer Advocates Regarding Fines and Remedies*, filed June 7, 2013, at 14.

⁷⁹ *Reply Brief of the City and County of San Francisco on Penalties (CCSF Reply)*, filed June 6, 2013, at 8.

5. Factors to Consider in Setting Penalty Amount

In determining the penalty to be imposed for violations found in the *San Bruno Violations Decision*, the *Recordkeeping Violations Decision* and the *Class Location Violations Decision*, we are guided by D.98-12-075, which identified the following factors:⁸⁰

1. Severity of the offense;
2. The conduct of the utility before, during, and after the offense;
3. The financial resources of the utility;
4. The totality of the circumstances in furtherance of the public interest; and
5. The amount of the fine in relationship to prior Commission decisions.

We have consistently applied the factors identified in D.98-12-075 to all enforcement proceedings, including, most recently, our investigation into the 2008 gas distribution pipeline explosion at Rancho Cordova.⁸¹

5.1. Severity of the Offense

The severity of the offense includes consideration of economic harm, as well as physical harm to people or property. Further, “disregarding a statutory or Commission directive, regardless of the effects on the public, will be accorded a high level of severity.”⁸²

⁸⁰ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates* (D.98-12-075), 84 Cal.P.U.C.2d at 186-190.

⁸¹ See *Presiding Officer’s Decision Regarding Joint Motion to Approve the Stipulation of Pacific Gas And Electric Company and the Consumer Protection and Safety Division Concerning Rancho Cordova and Related Stipulation (Rancho Cordova Decision)* (D.11-11-001), issued November 3, 2011, at 35.

⁸² *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C.2d at 188.

5.1.1. CPSD and Intervenors' Positions

There is no dispute that the San Bruno explosion resulted in physical harm to persons and destruction or damage to property. From that standpoint alone, the violations associated with the San Bruno explosion and Segment 180 would be considered severe. Moreover, DRA contends the San Bruno explosion was the result of “*multiple continuing violations by PG&E committed over many years . . . and that these violations compromised the integrity of PG&E’s entire gas pipeline system.*”⁸³

In addition to this physical harm, CPSD and Intervenors argue that violations associated with PG&E’s operations and recordkeeping practices should also be considered severe, as they have resulted in economic harm to ratepayers.

As an example, CPSD argues that PG&E’s failure to maintain complete and accurate records, as well as cutting back on other safety-related activities, resulted in the company’s GT&S revenues exceeding actual revenue requirements for a number of years.⁸⁴ Consequently, CPSD contends that many of the safety-related projects ordered in the *PSEP Decision* are to correct these deficiencies.⁸⁵ Moreover, CPSD asserts these violations relate to the safety of PG&E’s entire system, not just Segment 180, and many of the violations began over 40 years ago.⁸⁶

⁸³ *DRA Opening Brief* at 20 (emphasis in original).

⁸⁴ *CPSD Opening Brief* at 42.

⁸⁵ *CPSD Opening Brief* at 43.

⁸⁶ *CPSD Opening Brief* at 44.

TURN echoes many of CPSD's comments and contends that, based on the evidence in these proceedings, "the testing and replacement that was approved in [the *PSEP Decision*] is made necessary by the fact that PG&E's violations prevent any reasonable assurance of the integrity of PG&E's underground pipelines."⁸⁷

Finally, CPSD and Intervenors note that these cases do not involve single, isolated violations. Rather these proceedings involve "a pervasive, systemic and long-standing failure on the part of PG&E to maintain its gas pipeline system safely."⁸⁸ As TURN points out, "the sheer number and scope of the ongoing violations is unprecedented."⁸⁹ Moreover, PG&E had more than adequate prior notice of recordkeeping problems, yet failed to take any actions.⁹⁰ Consequently, "PG&E will be doing remedial work *for decades*, much of it at the expense of ratepayers."⁹¹ By way of example, CPSD refers to PG&E's response to a joint CPSD and TURN data request, which included a list of more than 23,700 pipe segments in the most heavily populated high consequence areas for which PG&E had not located a valid strength test record.⁹²

⁸⁷ TURN Opening Brief at 26.

⁸⁸ CCSF Opening Brief at 5.

⁸⁹ TURN Opening Brief at 25.

⁹⁰ TURN Opening Brief at 26; DRA Opening Brief at 20-21; CCSF Opening Brief at 5.

⁹¹ CPSD Opening Brief at 44 (emphasis in original).

⁹² CPSD Opening Brief at 45.

Based on these considerations, CPSD and Intervenors argue that the violations should be accorded a high level of severity, and the highest level of fines should be imposed.⁹³

5.1.2. PG&E's Position

PG&E does not dispute that the San Bruno explosion caused physical harm. However, it asserts “the fact that physical harm occurs does not mean that the harm was caused by the alleged violation.”⁹⁴ Further, PG&E notes that many of the violations alleged in the Class Location OII and the Recordkeeping OII are unrelated to the San Bruno explosion and did not cause any physical harm.⁹⁵ PG&E therefore contends “the conduct underlying alleged violations was not intentional and is unrelated to the cause of the [Segment 180] rupture.”⁹⁶ As such, PG&E argues that the violations do not merit a severe penalty.

PG&E further argues that CPSD “improperly transformed single categories or courses of conduct into numerous individual alleged violations” and then exponentially increased the violations by counting each as a “continuing violation.”⁹⁷ PG&E argues that this methodology not only results in a total potential penalty that is unrealistic, but also is contrary to Commission precedent.

⁹³ *CPSD Opening Brief* at 42-44; *TURN Opening Brief* at 4; *CCSF Opening Brief* at 2; *DRA Opening Brief* at 18; *CSB Reply Brief* at 4.

⁹⁴ *PG&E Remedies Brief* at 36.

⁹⁵ *PG&E Remedies Brief* at 36.

⁹⁶ *PG&E Remedies Brief* at 38.

⁹⁷ *PG&E Remedies Brief* at 39 & 41.

Finally, PG&E contends that the Commission should group violations “by category for the purpose of finding violations and calculating any penalties.”⁹⁸ It notes that in *Utility Consumers Action Network v. SBC Communications (AT&T)* [D.08-08-017], the Commission had determined that although AT&T had “violated two subsections of [Pub. Util. Code] § 2883, the company had pursued essentially one course of conduct: failure to comply with the warm line policies enacted by the legislature.”⁹⁹ On that basis, PG&E argues that the millions of violations alleged by CPSD in the Class Location OII be condensed into a “single course of conduct, failure to properly implement patrol, class location and continuing surveillance procedures.”¹⁰⁰

5.1.3. Discussion

We do not agree with PG&E’s arguments that violations that did not cause or result in physical harm should be considered less severe. In D.98-12-075, we noted that both economic harm and failure to comply with statutes or Commission directives were also considered when determining the severity of a violation. With respect to economic harm, we noted: “The fact that the economic harm may be difficult to quantify does not diminish severity or the need for sanctions.” We further noted

Many potential penalty cases before the Commission do not involve any harm to consumers but are instead violations of reporting or compliance requirements. In these cases, the harm may not be to consumers but rather to the integrity of the regulatory process.

⁹⁸ *PG&E Remedies Brief* at 41.

⁹⁹ *PG&E Remedies Brief* at 41 (citing D.08-08-017 at 37-38 (slip op.)).

¹⁰⁰ *PG&E Remedies Brief* at 40.

...

Such compliance is absolutely necessary to the proper functioning of the regulatory process. For this reason, disregarding a statutory or Commission directive, regardless of the effects on the public, will be accorded a high level of severity.¹⁰¹

Therefore, contrary to PG&E's arguments, economic harm and failure to comply with statutes or Commission directives are considered severe violations.

We find that PG&E's violations have caused economic harm to ratepayers. As noted by TURN, the San Bruno explosion caused economic harm to the residents of San Bruno.¹⁰² Moreover, PG&E has failed to comply with statutes and Commission directives. Many of the actions mandated in the *PSEP Decision* are due to PG&E's failure to maintain complete and accurate records and to comply with the applicable statutes and regulations concerning the proper surveillance, operation and maintenance of its transmission pipeline system.¹⁰³

We further disagree with PG&E's argument that those violations alleged in the Recordkeeping OII and the Class Location OII that do not directly relate to the San Bruno explosion should not be considered as severe. All of the violations raised in the Pipeline OIIs concern failure to comply with federal or state laws or regulations. Consistent with D.98-12-075, PG&E's violations in those OIIs will be accorded a high level of severity.

¹⁰¹ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C.2d at 188.

¹⁰² *TURN Opening Brief* at 26.

¹⁰³ *PSEP Decision* at 87 (slip op.).

PG&E has acknowledged in the Class Location OII that it has not maintained nor operated all segments of its transmission pipeline system at the proper class location.¹⁰⁴ Although PG&E has argued that the failure to maintain the proper class location did not necessarily present a serious risk to public safety, failure to maintain the proper MAOP in light of the population density where the pipeline was located increases the potential physical and economic harm to the public in the event of a pipeline failure. Similarly, as we discussed in *Resolution ALJ-277 Affirming Citation No. ALJ-274 2012-01-001 Issued to Pacific Gas and Electric Company for Violations of General Order 112-E (Resolution ALJ-277)*, issued on April 20, 2012, concerning PG&E's violations of leak survey requirements,

Leak surveys are the primary industry tool available to detect and correct gas leaks before they become serious. Moreover, leak survey data provides critical information that operators must consider in determining the need and schedule for necessary maintenance or replacement. ... The potential public harm from these violations was great. The violations were significant, with the capacity for serious injury to persons and property....¹⁰⁵

Additionally, we do not agree that CPSD has inappropriately inflated the number of violations to enhance their severity. PG&E's efforts to reduce the number of violations, and thus the severity of these violations, disregards the company's responsibility to ensure the safe operations of its pipeline system.

With respect to the Class Location OII, PG&E cannot credibly argue that maintaining the proper class location designation in response to changes in

¹⁰⁴ See, e.g., Class Location Exh. PG&E-1 at 1-1 – 1-2 (PG&E/Yura); *PG&E Remedies Brief* at 1.

¹⁰⁵ *Resolution ALJ-277* at 6-7.

population density (49 CFR 192.609), confirming the maximum allowable operating pressure of pipelines in response to changes in class designation (49 CFR 192.611), or performing continuous surveillance over the maintenance and operations of its facilities (49 CFR 192.613) are not all, individually, important aspects of operating its pipeline system in a safe manner. Similarly, PG&E cannot reasonably believe that failure to maintain the proper class designation for a segment of pipe in San Francisco is the same violation as failing to maintain the proper class designation for a segment of pipe in the Mojave Desert. If these violations had occurred individually and/or on one or two segments of pipeline, they would have been charged separately. The fact that the violations are pervasive throughout PG&E's pipeline system and result in the violation of more than one regulation or law does not change the need to consider these as separate violations.

With respect to the San Bruno OII, PG&E cites two examples where, it contends, CPSD improperly expanded the number of violations.¹⁰⁶ First, PG&E contends that CPSD "doubled" a violation for Segment 180 girth welds by alleging violations of both Section 811.27(E) of ASME B31.1.8 - 1955 and API 1104.¹⁰⁷ However, CPSD had withdrawn the Section 811.27(E) violation and the *San Bruno Violations Decision* did not adopt it.¹⁰⁸ Second, PG&E contends that CPSD improperly included specific violations within the scope of a "generic" violation.¹⁰⁹ The generic alleged violation referenced by PG&E is that "By

¹⁰⁶ *PG&E Remedies Brief* at 40.

¹⁰⁷ *PG&E Remedies Brief* at 40.

¹⁰⁸ *San Bruno Violations Decision*, Section 5.1.8.

¹⁰⁹ *PG&E Remedies Brief* at 40.

installing pipeline sections that were not suitable and safe for the conditions under which they were used, PG&E violated the safe industry practices described in Section 810.1 of ASME B31.1.8 – 1955, creating an unsafe system in violation of Pub. Util. Code § 451.” The *San Bruno Violations Decision* concurred with PG&E’s contention that this violation significantly overlapped two other alleged violations and therefore combined them into a single adopted violation.¹¹⁰ Accordingly, we do not find that the examples cited by PG&E support its argument that CPSD has improperly expanded the number of violations in the San Bruno OII.

Finally, in addition to violations of federal and state statutes and regulations, we found that PG&E violated Rule 1.1 of the Commission’s Rules of Practice and Procedure in the Recordkeeping OII.¹¹¹ Rule 1.1 states

Any person who signs a pleading or brief, enters an appearance, offers testimony at a hearing, or transacts business with the Commission, by such act represents that he or she is authorized to do so and agrees to comply with the laws of this State; to maintain the respect due to the Commission, members of the Commission and its Administrative Law Judges; and never to mislead the Commission or its staff by an artifice or false statement of fact or law.¹¹²

There is no dispute that misleading the Commission and impeding the staff’s investigation in the Recordkeeping OII are severe offenses.

For the reasons discussed above, we find that the violations are severe.

¹¹⁰ *San Bruno Violations Decision*, Section 5.1.10.

¹¹¹ *Recordkeeping Violations Decision*, Section 7.4.

¹¹² Rules of Practice and Procedure, Rule 1.1 (emphasis added).

5.2. Conduct of the Utility Before, During and After the Offense

This factor takes into consideration the utility's efforts to prevent a violation by ensuring compliance with applicable laws, regulations, and Commission directives. Additionally, the Commission will assess the utility's monitoring of activities to ensure compliance. Pursuant to Pub. Util. Code § 702,

Every public utility shall obey and comply with every order, decision, direction, or rule made or prescribed by the commission in the matters specified in this part, or any other matter in any way relating to or affecting its business as a public utility, and shall do everything necessary or proper to secure compliance therewith by all of its officers, agents, and employees.

Moreover, in considering utility culpability in violations, "the act, omission, or failure of any officer, agent, or employee of any public utility, acting within the scope of his official duties or employment, shall in every case be the act, omission, or failure of such public utility." Finally, the Commission will consider whether once the utility became aware of the violation, it promptly brought the violation to the attention of the Commission.¹¹³

5.2.1. CPSD and Intervenors' Positions

CPSD argues that PG&E failed to take action to prevent the violations from occurring. With respect to Segment 180, CPSD argues that PG&E failed to follow industry standards related to construction and installation of pipe, including visual examination of the pipe and its welds, pressure testing and retention of necessary records.¹¹⁴ Additionally, CPSD notes that PG&E's

¹¹³ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C.2d at 188-189.

¹¹⁴ *CPSD Opening Brief* at 45-46.

corporate culture placed profits over safety by making significant cuts in its safety-related personnel and tasks.¹¹⁵ In particular, CPSD states that PG&E had discontinued its GPRP for a risk management program, resulting in significantly reducing the number of miles of high consequence areas (HCA) transmission pipeline replaced. However, as CPSD notes, “[r]egulations are not goals, they are absolute requirements. Systems should be engineered so that those requirements are met.”¹¹⁶

CPSD further maintains that although PG&E was required to actively monitor all activities concerning its transmission pipeline system, it did not take any actions to detect violations.¹¹⁷ As such, CPSD argues that PG&E’s claims that it was unaware of problems with its records for over 50 years are not credible. CPSD points to various occasions where it believes PG&E could have detected the flawed pup sections in Segment 180. Further, it notes that PG&E had been informed of errors in its risk assessment program in 1984, but failed to take any action. CPSD argues that if PG&E had done so, PG&E “could have avoided the San Bruno rupture and fire.”¹¹⁸

Finally, CPSD states “the violations came to light subsequent to the explosion in San Bruno. PG&E did nothing to disclose them to the Commission, or rectify them in advance.”¹¹⁹ CPSD and TURN further note that all the actions PG&E has taken since the San Bruno explosion to rectify the disclosed violations

¹¹⁵ CPSD Opening Brief at 46.

¹¹⁶ CPSD Opening Brief at 46.

¹¹⁷ CPSD Opening Brief at 47.

¹¹⁸ CPSD Opening Brief at 48-49.

¹¹⁹ CPSD Opening Brief at 49.

were mandated by PHMSA or the Commission, not initiated by the company.¹²⁰ For example, CPSD notes that although PG&E knew its GIS system was missing data, it had taken no actions to “immediately correct and report” the violations.¹²¹

Intervenors further argue that PG&E’s conduct throughout the course of these proceedings demonstrate that it was not acting in good faith. Both CSB and CCSF point to PG&E’s aggressive litigation strategy and efforts to delay providing records necessary for a thorough investigation.¹²² CSB further states that while PG&E has admitted to two minor violations, it “cannot prove that [it] will fix the numerous and egregious deficiencies in its system.”¹²³ Similarly, TURN notes that PG&E has only admitted to the most trivial violations and “made frivolous legal arguments, such as the argument that [Pub. Util. Code] § 451 does not impose any safety requirements.”¹²⁴

5.2.2. PG&E’s Position

PG&E contends that it has always acted in good faith. It notes that CPSD had conducted multiple audits of PG&E’s gas transmission operations prior to the San Bruno explosion and its audit findings had approved PG&E’s general practices.¹²⁵ Thus, PG&E argues that even if CPSD’s audits were not thorough or

¹²⁰ CPSD Opening Brief at 49; TURN Opening Brief at 27.

¹²¹ CPSD Opening Brief at 50.

¹²² CSB Opening Brief at 33; CCSF Opening Brief at 6.

¹²³ CSB Opening Brief at 36.

¹²⁴ TURN Opening Brief at 28.

¹²⁵ PG&E Remedies Brief at 43.

comprehensive, “that is not a valid aggravating factor in penalizing PG&E.”¹²⁶ PG&E further states “while PG&E had room for improvement, its practices met regulatory requirements and were consistent with accepted industry practices.”¹²⁷ In particular, PG&E notes that the shortfalls in its recordkeeping practices were not unique, and gaps in pipeline construction and maintenance records were common among natural gas pipeline operators.¹²⁸

PG&E adds that the Commission should take into account PG&E’s efforts to improve the safety of its gas transmission system immediately after the San Bruno explosion. It lists the numerous actions it took to assist the residents and CSB immediately after the explosion.¹²⁹

PG&E disputes CPSD’s and Intervenors’ assertions that it only took action after being ordered to do so by the Commission or PHMSA. It states that it undertook to verify pipeline specifications before ordered to do so by the Commission.¹³⁰ Further, PG&E argues that it has “acted in good faith on the Commission’s directives, and the recommendations issued by the CPSD and the NTSB.”¹³¹ It then discusses the various improvements it has undertaken since the San Bruno explosion, including corporate-level organization changes, creation of a new records management system and policy and improvements

¹²⁶ *PG&E Remedies Brief* at 43.

¹²⁷ *PG&E Remedies Brief* at 47.

¹²⁸ *PG&E Remedies Brief* at 47-48.

¹²⁹ *PG&E Remedies Brief* at 49 – 51.

¹³⁰ *PG&E Remedies Brief* at 44.

¹³¹ *PG&E Remedies Brief* at 51.

and initiatives undertaken in its gas organization.¹³² Moreover, PG&E contends that even if these improvements were mandated by the Commission,

{Pub. Util. Code} § 2104.5 presupposes that the improvements were required to achieve compliance with Commission rules and orders. The question is the good faith of the utility in attempting to achieve that compliance and whether the company embraced the spirit of change, rather than grudgingly accepting a mandate.¹³³

Thus, PG&E argues that it should be given credit for its good faith in implementing the changes mandated by the Commission in the *PSEP Decision*.¹³⁴

Finally, PG&E addresses CPSD's allegations that PG&E demonstrated bad faith because it had withheld evidence of errors in GIS (the audit change log). PG&E first states that CPSD incorrectly concluded that all changes made to pipeline attribute fields in GIS were to correct errors, when many of the changes were, in fact, "due to new pipe installation, hydro testing, changes made to more precisely reflect the location of the pipeline, and changes to pipe attribute information (including corrections to pipe attributes identified through normal course of business and records research).¹³⁵ Further, PG&E asserts it had not withheld this information from CPSD, but rather had "provided a written description of the HCA audit change log and an excerpt of the log itself on September 29, 2011."¹³⁶ Finally, PG&E asserts that CPSD's allegations were

¹³² *PG&E Remedies Brief* at 54 - 62.

¹³³ *PG&E Remedies Brief* at 63.

¹³⁴ *PG&E Remedies Brief* at 51-53 & 63.

¹³⁵ *PG&E Remedies Brief* at 45.

¹³⁶ *PG&E Remedies Brief* at 46.

made based on hindsight. “Prior to the [San Bruno explosion], there was no indication that Segment 180 was constructed from anything other than the properly manufactured DSAW transmission pipe requisitioned for the job, and the lack of pressure testing records, or even pressure testing, was permissible for Segment 180 under the grandfather clause.”¹³⁷

For these reasons, PG&E argues that it had acted in good faith to discover, disclose and remedy violations.

5.2.3. Discussion

We find that PG&E did not take adequate steps to prevent the violations from occurring. PG&E appears to rely on CPSD’s audits, which had approved PG&E’s general practices, to determine that it was in compliance with the regulations.¹³⁸ However, as PG&E recognizes, CPSD’s audits are not comprehensive. More importantly, as the pipeline operator, the onus to ensure that its gas transmission pipeline system is operated safely is on PG&E, not CPSD.

PG&E also did not take adequate steps to ensure compliance with applicable laws and regulations. Although PG&E recognizes its duty to maintain design, installation, testing, operating and maintenance records for all segments of its transmission pipeline system, it admits that it had lost or inadvertently destroyed records over the years. Despite knowing that it was missing records and the associated data that it was required to maintain, PG&E took no action to correct these violations.

¹³⁷ *PG&E Remedies Brief* at 47.

¹³⁸ *PG&E Remedies Brief* at 43.

As we discuss in the *Recordkeeping Violations Decision*, PG&E management had been notified at various times of the impact of not having the necessary records. Some examples include:

- In 1981, the NTSB investigated a gas pipeline leak in San Francisco and determined that PG&E's delay in stopping the flow of gas was because it could not locate one emergency valve due to inaccurate records.
- In 1984, PG&E hired Bechtel Petroleum, Inc. (Bechtel) to conduct a risk analysis to develop a methodology and database to prioritize replacement of transmission line segments and distribution mains. In its report to PG&E, Bechtel stated that due to the inaccuracy and lack of various data variables, the risk analysis was of limited use.
- Bechtel advised PG&E in 1986 of the risk to its integrity management program caused by missing pipeline data, and the need for additional research to resolve these "uncertainties."
- In 1992, PG&E's Records and Information Coordinator had written a memo concerning PG&E's document recordkeeping practices and expressing concern over the utility's inability to maintain essential pipeline data.

Despite repeatedly being notified of these recordkeeping shortfalls, PG&E did not take any action to obtain the missing data. Further, as we determined in the *PSEP Decision*, PG&E's actions since the 1980's has been a shift away from safety:

The decision-making and priorities driving PG&E's pipeline safety actions in 1985 and 1992 show a different PG&E than the PG&E of the early 2000's. The 1985 plan showed PG&E thinking ahead, coordinating with local authorities planning similar trenching work, updating meters and associated system components as part of a comprehensively planned, orderly approach to making economically sound upgrades as part of an overall system improvement plan. PG&E included "manpower and training" among its considerations, showing that it was planning to use its own employees and not outside consultants. In this way, PG&E staff would study its system and actually

perform pipeline tests and replacements, thus retaining the knowledge within the organization for long-term operations and planning.

In contrast, as the Independent Review Panel pointed out, more recently PG&E's field operations and integrity management efforts were not coordinated.¹³⁹

We also do not agree with PG&E's arguments that it should be found to have acted in good faith simply because its practices were consistent with accepted industry practices. As we have discussed in our decisions on violations, PG&E's attempts to equate its conduct with that of other gas utilities is unpersuasive.¹⁴⁰ Those other utilities are not subject to our jurisdiction, GO 112 and its successors, or California law. Moreover, the fact that other gas utilities may also be violating statutes and regulations is not an excuse for PG&E to not be in compliance. PG&E has not provided any authority that states that compliance with gas safety requirements is optional or can be waived.

We further disagree that PG&E should be considered to have demonstrated good faith and given "credit" because it "embraced" the directives contained in the *PSEP Decision* and did not "grudgingly" accept them. All utilities under the Commission's jurisdiction are expected to comply with Commission directives and orders. Failure to do so subjects the utility to sanctions under Pub. Util. Code § 2107. The fact that PG&E has complied with the *PSEP Decision* without complaining does not demonstrate good faith. Moreover, the *PSEP Decision* directs PG&E to take corrective action for failing to

¹³⁹ *PSEP Decision* at 47 (slip op.).

¹⁴⁰ See, e.g., *Recordkeeping Violations Decision*, Section 9.1.

have the records necessary to ensure safe operations of its transmission system. PG&E should not be considered to be acting in good faith simply because it is now maintaining and operating its gas transmission pipeline system in accordance with governing laws and regulations.

Nonetheless, we acknowledge PG&E's effort immediately after the San Bruno explosion when it provided assistance to the CSB and its residents affected by the explosion. These actions, along with PG&E's corporate-level reorganization to improve operations and implementation of new practices and activities in its gas transmission business reflect PG&E's renewed commitments to ensuring the safe operation of its transmission system.

Finally, while we do not agree with Intervenors that PG&E's aggressive litigation strategy in these proceedings reflects bad faith, we do agree that some of the actions taken by PG&E's counsel in the course of these proceedings reflect bad faith. In the *Recordkeeping Violations Decision*, we found that PG&E violated Rule 1.1 on two occasions with respect to its responses to CPSD's data requests¹⁴¹ and that it potentially violated Rule 1.1 in another.¹⁴² Finally, we note that in all three OIIs, CPSD and Intervenors have alleged that PG&E has delayed and failed to completely respond to data requests. PG&E's delay and failure to provide complete responses impeded CPSD's ability to conduct its investigation and prepare its reports in the OIIs.

In light of the above, we do not find that PG&E has acted in good faith to discover, disclose and remedy the violations.

¹⁴¹ *Recordkeeping Violations Decision*, Section 7.4.

¹⁴² See *Recordkeeping Violations Decision*, Section 9.3.

5.3. Financial Resources of the Utility

In setting the level of the fine, the Commission needs to balance “the need for deterrence with the constitutional limitations on excessive fines.”¹⁴³ Consequently, the Commission must “adjust fine levels to achieve the objective of deterrence, without becoming excessive, based on each utility's financial resources.”¹⁴⁴ We have addressed the Excessive Fines Clause and the issue of proportionality in Section 4.3 above. In this section, we address the extent to which PG&E’s financial resources would limit the amount of the penalty to be imposed.

5.3.1. CPSD and Intervenors’ Positions

CPSD asserts that in setting the penalty level, the Commission must take into account that PG&E is one of the largest utilities in the nation and that between 1999 and 2010, actual revenues from GT&S services exceeded revenue requirements by at least \$435 million.¹⁴⁵ Based on testimony from CPSD witnesses Lubow and Malko of Overland Consulting (Overland), CPSD contends that PG&E could sustain fines and remedies up to \$2.25 billion.¹⁴⁶ CPSD states that this recommended penalty amount “while harsh enough to have a deterrent

¹⁴³ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C. 2d at 189.

¹⁴⁴ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C. 2d at 189.

¹⁴⁵ *CPSD Opening Brief* at 51.

¹⁴⁶ *CPSD Opening Brief* at 51-53. The Overland Report evaluates the financial strength of PG&E’s parent company, PG&E Corporation (PCG). It explains “Although Pacific Gas & Electric is the utility subsidiary regulated by the CPUC, we mainly focused on the holding company, PCG, in our analysis because the financial strength of the holding company ultimately determines the amount of capital that can be raised.” (Exh. Joint-52 at 1, fn. 3.)

effect, is not so harsh that PG&E's credit worthiness would suffer to the point where ratepayers would be negatively impacted."¹⁴⁷

Intervenors support the proposed level of fines and remedies proposed by CPSD. CSB notes that PG&E reported operating revenues of \$13.841 billion in 2010, and PG&E Corporation's net income after dividends on preferred stock for the first quarter of 2012 was \$239 million.¹⁴⁸ CSB cites to various PG&E reports and concludes that PG&E has conveyed increasing confidence in the company's financial outlook to investors.¹⁴⁹ CSB further notes that PG&E's own witness had conceded that while it would be a challenge to issue equity or raise capital sufficient to pay a \$2 billion fine, PG&E had the capacity to do so.¹⁵⁰ As such, CSB maintains a \$1.25 billion fine (excluding other proposed remedies and disallowances) would be appropriate in light of PG&E's size, 2010 operating revenues and 2013 profits.¹⁵¹

CCSF echoes CSB's arguments, noting that PG&E is the biggest public utility in California, with ample resources. Additionally, CCSF argues that it is important for the Commission "to devise a penalty high enough to deter a large, well-resourced corporation like PG&E from undervaluing safety in the future" while still allowing PG&E to survive.¹⁵²

¹⁴⁷ CPSD *Opening Brief* at 53.

¹⁴⁸ CSB *Opening Brief* at 29.

¹⁴⁹ CSB *Opening Brief* at 29.

¹⁵⁰ CSB *Opening Brief* at 29-31.

¹⁵¹ CSB *Opening Brief* at 28. CSB subsequently lowered its proposed fine amount to \$900 million in its reply brief.

¹⁵² CCSF *Opening Brief* at 7.

TURN further notes that given the extent of the harm resulting from the San Bruno explosion and the scope of the violations at issue in the Pipeline OIIs, fines imposed in other proceedings do not provide much guidance.¹⁵³ It notes that the penalties imposed in six incidents identified by PG&E that involved natural gas pipeline explosions and fatalities in other jurisdictions are not comparable to the San Bruno explosions, as three of the incidents were caused by third-parties and one had a statutory cap on the penalty amount.¹⁵⁴ In contrast, TURN argues that the scope and number of the violations and the extent of harm in the Pipeline OIIs means that the fines in these proceedings would likely exceed PG&E's market value. Therefore, TURN states "[t]he ability to pay should be limited not by total available assets, but by the amount the company can pay without impacting the utility's ability to provide service (for example, by raising capital for investment) or increasing rates."¹⁵⁵ At the same time, TURN cautions that the penalty level should not be set based on analysts' expectations, as that perspective "creates a Catch-22 that would circumvent the Commission's statutory and legal responsibilities."¹⁵⁶ Finally, TURN notes that the \$2.25 billion penalty estimated by Overland included both fines and other potential disallowances.¹⁵⁷ It asserts "[t]his number is absolutely within the range of forecasts by equity analysts of the total 'fines and penalties.'" ¹⁵⁸

¹⁵³ *TURN Opening Brief* at 29.

¹⁵⁴ *TURN Opening Brief* at 30.

¹⁵⁵ *TURN Opening Brief* at 31.

¹⁵⁶ *TURN Opening Brief* at 38.

¹⁵⁷ *TURN Opening Brief* at 40 (referencing Exh. Joint-52 at 6).

¹⁵⁸ *TURN Opening Brief* at 40.

5.3.2. PG&E's Position

PG&E disputes Overland's analysis, stating that the \$2.25 billion threshold is "essentially a made-up number based on two financial metrics that have nothing to do with market capacity for equity to be used to fund a penalty."¹⁵⁹ It states that a \$2 billion penalty would be larger than any penalty ever imposed on a utility and "there is no evidence that a utility has ever issued stock for the specific purpose of paying *any* fine or penalty, much less one of that magnitude."¹⁶⁰

PG&E notes that Overland's analysis fails to take into account PG&E's planned equity issuances to fund capital expenditures.¹⁶¹ PG&E states that the company has already projected significant capital expenditures through 2016 and that any equity issuances to fund a penalty would be incremental to planned equity issuances. PG&E believes that such an equity issuance would be met with heightened investor scrutiny and may require PG&E to postpone some of its planned infrastructure improvements.¹⁶² Further, it argues that an equity offering to fund a penalty would likely be less well-received by investors.¹⁶³ Among other things, PG&E states that an equity offering to pay a fine or penalty would not provide any of the benefits that investors view favorably, such as "reduce financial risk, increase future investment flexibility and reduce interest

¹⁵⁹ *PG&E Remedies Brief* at 64. The two metrics used are the price to book and dividend payout ratios.

¹⁶⁰ *PG&E Remedies Brief* at 71 (emphasis in original).

¹⁶¹ *PG&E Remedies Brief* at 65.

¹⁶² *PG&E Remedies Brief* at 66 – 67.

¹⁶³ *PG&E Remedies Brief* at 69.

expense.”¹⁶⁴ PG&E goes on to warn that if CPSD’s or Intervenors’ proposed penalties are approved, it may result in “a less favorable perception of the regulatory climate in California.”¹⁶⁵

PG&E next criticizes Overland’s methodology to calculate the \$2.24 billion threshold level. It notes that neither of the metrics used by Overland to calculate this threshold amount – the price to book ratio nor the dividend payout ratio – is “typically used by investment banks to determine the market’s capacity for an equity offering.”¹⁶⁶ PG&E discusses Overland’s methodology and concludes that “Overland’s conclusion that PG&E could absorb a penalty of \$2.25 billion lacks any meaningful support in the record.”¹⁶⁷

Finally, PG&E maintains that CPSD and Intervenors have proposed remedies that “do not recognize the full extent of PG&E’s unrecovered and unrecoverable costs that should be counted against the [\$2.25 billion] threshold level.”¹⁶⁸ PG&E notes that PG&E has already incurred unrecovered and unrecoverable costs as a result of disallowances in the *PSEP Decision*, spending above rate case amounts in gas transmission and other lines of business, right of way management costs and contributions to the City of San Bruno.¹⁶⁹ Further, PG&E argues that investors do not distinguish between equity to fund an explicit disallowance or utility expenditures that exceeded the amounts adopted in its

¹⁶⁴ *PG&E Remedies Brief* at 69.

¹⁶⁵ *PG&E Remedies Brief* at 68.

¹⁶⁶ *PG&E Remedies Brief* at 75.

¹⁶⁷ *PG&E Remedies Brief* at 75.

¹⁶⁸ *PG&E Remedies Brief* at 81.

¹⁶⁹ *PG&E Remedies Brief* at 82.

rate case.¹⁷⁰ Therefore, PG&E argues that based on the amount of “unrecovered and unrecoverable operating costs since the San Bruno accident – most of which went to the gas transmission system . . . PG&E should not be penalized beyond the costs that its shareholders are already bearing.”¹⁷¹

5.3.3. Discussion

There is no dispute that the Commission must consider PG&E’s financial resources in setting the penalty amount. PG&E’s market value as of January 10, 2012 was \$16.439 billion, and an aggregate value of \$29.117 billion.¹⁷² These values are significantly higher than the mean (\$2.494 billion and \$2.766, billion) and median (\$2.215 billion and \$3.060 billion) for comparable companies.¹⁷³

Additionally, even if one were to only consider PG&E’s gas transmission and distribution business on a standalone basis, it would have an aggregate value of approximately \$6.4 billion, and an equity value of approximately \$4.3 billion.¹⁷⁴

Despite PG&E’s disagreement with Overland’s methodology for arriving at the \$2.25 billion “threshold level,” we find that the record supports a conclusion that PG&E has the financial resources to support a \$2.25 billion penalty. A review of projected penalties estimated by various equity analysts, listed in Table 2 below, finds that the total projected fines, disallowances and other remedies range from \$500 million to \$3.65 billion (pre-tax):

¹⁷⁰ *PG&E Remedies Brief* at 84.

¹⁷¹ *PG&E Remedies Brief* at 84.

¹⁷² Exh. Joint-70, PG&E Corporation Discussion Materials, dated January 24, 2012, at 13. “Aggregate Value” is defined as “Market Value + Long-term Debt + Short-term Debt + Leases + Preferred Stock + Minority Interest – Cash”. (Exh. Joint-70 at 13, fn 1.)

¹⁷³ Exh. Joint-70 at 13.

¹⁷⁴ Exh. Joint-70, PG&E Corporation Discussion Materials, dated January 24, 2012, at 2.

Table 2
Estimated Level of Penalties¹⁷⁵

Equity Analyst	Date of Report	Projected Fine	Other unrecoverable expenses
Bank of America Merrill Lynch	Oct. 31, 2012	\$300 million	\$1.039 billion ¹⁷⁶
Barclays	Jan. 4, 2013	\$500 million	
BernsteinResearch	Nov. 29, 2012	\$400 million - \$500 million	\$3.1 billion ¹⁷⁷
BGC	Jan. 2, 2013	\$600 million	
Citi Research	Oct. 24, 2012	\$400 million	\$625 million ¹⁷⁸
Credit Suisse	Feb. 17, 2012	\$400 million	\$1.8 billion
Deutsche Bank	Oct. 31, 2012	\$500 million	Reduced projected 2013 and 2014 earnings per share to reflect impact of <i>PSEP Decision</i> .
Goldman Sachs	Aug. 7, 2012	\$500 million - \$700 million	
ISI	Nov. 1, 2012	\$750 million	\$2.9 billion

¹⁷⁵ Exh. Joint-79, PG&E Data Responses to OCHP_005-1013, Excerpts from Equity Analyst Reports re Level of Penalty.

¹⁷⁶ Exh. Joint-79 at 1 (estimated unrecoverable expenses of \$514M in 21013, \$435M in 2014 and \$90M in 2015).

¹⁷⁷ Exh. Joint-79 at 3 (\$1 billion unrecovered costs incurred under *PSEP Decision* and a further \$2.1 billion in San Bruno-related costs, excluding fines).

¹⁷⁸ Exh. Joint-79 at 7 (\$225 million in 2012, \$250 million in 2013, \$75 million in 2014 and \$75 million in 2015).

J.P. Morgan	Oct. 11, 2012	\$100 million	\$535 million
Macquarie (USA)	Feb. 17, 2012	\$300 million	\$1.5 billion
Morgan Stanley	Oct. 15, 2012	\$500 million	\$1 billion ¹⁷⁹
UBS	Dec. 31, 2012	\$500 million	
Wells Fargo	Oct. 24, 2012	\$750 million	Costs from <i>PSEP Decision</i>

Based on the estimated range of penalty amounts, there appears to be confidence by the financial community that PG&E has the financial resources to pay the penalty proposed by CPSD. Moreover, many of these analysts express confidence in PG&E's stock performance once the uncertainty surrounding these proceedings is resolved.

As TURN notes "The Commission should be cognizant of Wall Street expectations only to the extent they may affect the company's financial health to such an extent that they affect utility ratepayers."¹⁸⁰ In this respect, Wall Street has signaled that CPSD's proposed penalty amount may not have the adverse impact on PG&E's financial health predicted by PG&E. For example:

- BernsteinResearch concluded that even after incorporating its estimates of unrecoverable San Bruno-related fines into its revised earnings forecast for PG&E, its revised target price still implied an 11% upside (i.e., PG&E's share price was expected to increase).¹⁸¹

¹⁷⁹ Exh. Joint-79 at 13 ("We believe a headline figure of ~\$1.5 billion is likely, including a penalty of \$500 million and little recovery of certain pipeline costs.").

¹⁸⁰ *TURN Opening Brief* at 39.

¹⁸¹ Exh. Joint-79 at 3.

- BGC initiated coverage of PG&E on January 2, 2013 and noted “One school of investor thought is to wait for the equity issuance that is almost certain to follow any San Bruno resolution, with its likely penalty of perhaps \$600mm. We would probably be buyers on such an issuance, but we feel that expected issuance is already well discounted in the stock and we are more concerned with missing the possible upside from a deal announcement.”¹⁸²
- ISI states “Despite our frustration with the continue degradation of value at PGC, the stock still looks undervalued to this punitive outcome, and we retain our Buy rating.”¹⁸³

PG&E argues that while “it may be doable” to raise sufficient equity to pay a \$2 billion fine, its witness Mr. Fornell testified it would “ have some consequences in terms of having to limit future capital expenditures”¹⁸⁴ and would place PG&E “in a world of hurt.”¹⁸⁵ We remind PG&E that the purpose of a penalty is to deter future violations by the company and others. In achieving this purpose, the Commission is not guided by whether the adopted penalty imposes a hardship upon the company, but rather, whether the adopted penalty has a deterrent effect without adversely impacting ratepayers.

We are unconvinced that investors would not be able to distinguish between a penalty and unrecoverable or unrecovered operating costs. The analyst reports included in the record demonstrate that there is an understanding that the fines and other remedies under contemplation are in response to these adjudicatory proceedings. In contrast, unrecoverable or unrecovered operating costs are associated with general operations of the

¹⁸² Exh. Joint-79 at 4.

¹⁸³ Exh. Joint-79 at 10.

¹⁸⁴ *PG&E Remedies Brief* at 70 (citing 15 Joint RT at 1638:13-14 (PG&E/Fornell)).

¹⁸⁵ *PG&E Remedies Brief* at 70 (citing 15 Joint RT at 1619:8 (PG&E/Fornell)).

company, not expenditures for remediation. Further, PG&E provides no basis to support its argument that all spending above rate case amounts in gas transmission and other lines of business are attributable to the issues under consideration in these proceedings. For these reasons, we find that PG&E has the financial resources to pay the penalty proposed by CPSD.

Finally, we do not find PG&E's arguments against a \$2.25 billion penalty on the grounds that (a) it is the larger than any penalty ever imposed on a utility and (b) there is no evidence any utility has every issued stock for paying a penalty, to be persuasive. PG&E has provided no authority that a penalty imposed in these proceedings cannot exceed penalties previously imposed on a utility. As discussed in Sections 4.3 and 5.5 of this decision, we considered penalties imposed in other Commission enforcement proceedings and other pipeline accidents and determined that any penalty imposed in these Pipeline OIIs should be significantly greater. Additionally, it is up to PG&E, not the Commission, to determine how it will pay any fines or disallowances adopted in this decision. Although PG&E had originally stated that it would fund any penalties through the issuance of equity, it may decide to change its funding means upon further consideration.

5.4. The Totality of the Circumstances in Furtherance of the Public Interest

This factor takes into consideration facts that may mitigate or exacerbate the degree of wrongdoing.¹⁸⁶ "In all cases, the harm will be evaluated from the perspective of the public interest."¹⁸⁷

¹⁸⁶ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C.2d at 189.

5.4.1. CPSD and Intervenors' Positions

CPSD argues that given the strong public interest, the Commission must set a penalty that is not simply “the cost of doing business.”¹⁸⁸ Rather, the penalty must be “commensurate with the harm caused.”¹⁸⁹ Similarly, CSB maintains that the Commission must evaluate facts that exacerbate the wrongdoing and evaluate harm “from the perspective of the public interest, not the utility, not utility shareholders, not investment banks, not underwriters, and not investment analysts that cover the utility industry beat.”¹⁹⁰

DRA and CCSF also contend that the totality of circumstances requires a severe penalty.¹⁹¹ Among other things, DRA argues that in addition to the severity of the offense, PG&E’s conduct after the San Bruno explosion lacked any contrition, as evidenced by PG&E’s efforts to mislead the Commission.¹⁹² CCSF makes similar arguments and notes “An overriding exacerbating fact is the degree of physical harm involved in this case, . . . the systematic nature of the violations, the corporate culture that deemphasized safety, and PG&E’s continued insistence that its substandard maintenance and shoddy record practices are not violations of the law.”¹⁹³

¹⁸⁷ *Id.*

¹⁸⁸ *CPSD Opening Brief* at 55.

¹⁸⁹ *CPSD Opening Brief* at 55.

¹⁹⁰ *CSB Opening Brief* at 37 (citations omitted).

¹⁹¹ *DRA Opening Brief* at 34; *CCSF Opening Brief* at 7.

¹⁹² *DRA Opening Brief* at 34.

¹⁹³ *CCSF Opening Brief* at 7.

5.4.2. PG&E's Position

PG&E argues that an objective evaluation of the regulatory environment and PG&E's practices over time would demonstrate "that PG&E's prior shortcomings do not constitute violations that justify the extreme penalty proposed."¹⁹⁴ Among other things, PG&E contends that its gas transmission business has cooperated with CPSD in audits of PG&E's operations, practices and procedures and that "there was no intentional misconduct or willful neglect on the part of PG&E that led to the rupture."¹⁹⁵

PG&E further notes that "missing, inaccurate or incomplete records, especially regarding pressure testing of older pipelines, are a challenge faced by the entire natural gas industry."¹⁹⁶ Thus, PG&E's recordkeeping shortfall is not unique. Despite that fact, PG&E states that the Commission expects all gas operators to have maintained "traceable, verifiable, and complete" MAOP records, even though "by the account of every industry participant this requirement is new to the industry and difficult to achieve."¹⁹⁷

5.4.3. Discussion

We agree with PG&E that it is not the only gas pipeline operator that has experienced pipeline failure or is faced with recordkeeping shortfalls. We also agree that PG&E did not intentionally cause the San Bruno explosion. However, neither of these arguments diminishes the severity of the San Bruno explosion nor the extent of the recordkeeping shortfalls presented by CPSD.

¹⁹⁴ *PG&E Remedies Brief* at 84.

¹⁹⁵ *PG&E Remedies Brief* at 84 – 85.

¹⁹⁶ *PG&E Remedies Brief* at 86.

¹⁹⁷ *PG&E Remedies Brief* at 87.

In considering the appropriate penalty, we must consider the gravity and severity of the violations presented in the Pipeline OIIs, PG&E's statutory obligation to provide safe and reliable gas service, the pervasive nature of PG&E's recordkeeping shortfalls, the impact of the San Bruno explosion on its residents, and the Commission's and the public interest in ensuring safe and reliable natural gas service. Based on our discussion in connection with the other factors, we find that a severe penalty is warranted.

5.5. The Role of Precedent

This factor takes into consideration the proposed outcome with “previously issued decisions which involve the most reasonably comparable factual circumstances and explain any substantial differences in outcome.”¹⁹⁸

5.5.1. CPSD and Intervenors' Positions

CPSD and Intervenors maintain that the San Bruno explosion and fire cannot be compared to any previous incidents. Both CPSD and CSB state that with the exception of the investigation into the explosion of a distribution pipeline in Rancho Cordova, the Commission's past enforcement cases that resulted in large fines did not involve deaths or severe property damage.¹⁹⁹ Additionally, CSB maintains that the \$38 million fine assessed for the Rancho Cordova explosion was the result of a revised settlement, where the ALJ

¹⁹⁸ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C. 2d at 190.

¹⁹⁹ *CPSD Opening Brief* at 57; *CSB Opening Brief* at 38.

“estimated that PG&E faced up to \$97 million in penalties for stipulated violations.”²⁰⁰

CSB further argues that none of the “fatal gas pipeline accidents since 1999” identified in the *Wells Fargo Report* could be considered precedential since they were the result of different circumstances.²⁰¹ CSB notes that, unlike Line 132, the other pipeline explosions involved either pipelines that were significantly smaller in diameter or occurred in rural areas.²⁰²

Moreover, CPSD argues that the magnitude of PG&E’s “failure to keep traceable, verifiable, complete and accurate gas transmission records” is unprecedented.²⁰³ Since there are no comparable cases, CPSD argues that comparison of other precedential cases to San Bruno should be made carefully because “the death and destruction are more severe than any previous public utility incident.”²⁰⁴ CCSF echoes this argument, stating “prior Commission decisions are simply inapplicable and the Commission must decide this case based on the particular facts before it.”²⁰⁵

5.5.2. PG&E’s Position

PG&E notes that a \$2.25 billion penalty would exceed the total amount of fines and restitution ordered by the Commission between 1999 and February 21,

²⁰⁰ CSB *Opening Brief* at 38 (citing *Presiding Officer's Decision Regarding Joint Motion to Approve the Stipulation of Pacific Gas and Electric Company and the Consumer Protection and Safety Division Concerning Rancho Cordova and Related Stipulation (Rancho Cordova)* [D.11-11-001] at 41 (slip op.))

²⁰¹ CSB *Opening Brief* at 39-40.

²⁰² CSB *Opening Brief* at 40.

²⁰³ CPSD *Opening Brief* at 58.

²⁰⁴ CPSD *Opening Brief* at 58.

²⁰⁵ CCSF *Opening Brief* at 8.

2012 or any penalty imposed in any other jurisdiction.²⁰⁶ PG&E identifies two pipeline accidents, in Carlsbad, New Mexico and Allentown, Pennsylvania, that it believes are substantially similar to San Bruno and notes that penalties imposed in those accidents are significantly less than what is being considered here. PG&E further notes that the Commission had determined in its decision on the Rancho Cordova accident: “The potential penalty exposure of more than \$97 million is moderate to large in comparison to the size of PG&E’s operation of its public utility business, and would serve as a significant deterrent to ensure that similar incidents do not occur in the future.”²⁰⁷

5.5.3. Discussion

We agree with CPSD and Intervenors that none of the Commission’s prior enforcement proceedings are comparable. Unlike the other proceedings, the penalties under consideration are for three separate OIIs, each covering separate and distinct violations. The penalties to be imposed here would be for violations that directly resulted in 8 fatalities, numerous injuries, destruction or damage to over 100 homes as well as potential risk of harm to the public due to PG&E’s failure to have the necessary records to properly maintain and operate its gas transmission pipeline system and provide safe and reliable gas service. As CSB notes, PG&E “provides natural gas and electric service to approximately 15 million people throughout a 70,000 square mile service area in northern and central California.”²⁰⁸ None of the Commission’s prior enforcement cases or the

²⁰⁶ *PG&E Remedies Brief* at 89.

²⁰⁷ *PG&E Remedies Brief* at 93 – 94 (citing D.11-11-001 at 41.)

²⁰⁸ *CSB Opening Brief* at 28.

other gas pipeline accidents identified in the *Wells Fargo Report* had an impact on such a large area or number of people.

Nonetheless, we find that the 2008 Rancho Cordova explosion and fire provides some precedential guidance. The Rancho Cordova explosion and fire concerned the rupture of a natural gas distribution pipe, which resulted in one fatality, injuries to several others, destruction of one home and damages to adjoining homes.²⁰⁹ In considering whether to grant a joint motion between PG&E and CPSD to approve a stipulation between the parties, the ALJ had concluded:

In this OII, CPSD alleges five different instances involving violations of Pub. Util. Code §451 and seven sections of 49 CFR that have been incorporated into GO 112-E. If these allegations are fully litigated, and assuming each CPSD allegation is proven and a continuing penalty amount of \$20,000 per day is imposed for each violation of Pub. Util. Code §451 and GO 112-E, PG&E potentially faces \$97 million *or more* in penalties.

The potential penalty exposure of more than \$97 million is moderate to large in comparison to the size of PG&E's operation of its public utility business, and would serve as a significant deterrent to ensure that similar incidents do not occur in the future."²¹⁰

Based on the determinations in *Rancho Cordova*, and in consideration of the significantly greater physical impact of the San Bruno explosion and fire, the increased risk to all residents in PG&E's service territory and the duration of the

²⁰⁹ *Rancho Cordova* at 3 (slip op.).

²¹⁰ *Rancho Cordova* at 41-42 (slip op.) (citations omitted, emphasis added).

violations²¹¹, it is reasonable for the potential penalty exposure to PG&E for the violations found in these OII proceedings be significantly higher than the \$97 million calculated by the ALJ in the *Rancho Cordova* proceeding.

Further, unlike prior enforcement proceedings, parties have proposed that the Commission adopt a wide-range of remedies in addition to any fines imposed under Pub. Util. Code §§ 2107 and 2108. The remedies are not those traditionally utilized in enforcement proceedings (e.g., refunds), but rather to ensure that PG&E fulfills its obligations to operate its gas pipeline system in a safe manner.

For these reasons, we find that the unique and extraordinary nature of this enforcement proceeding cannot be compared to any prior Commission decisions, or even other gas pipeline explosions.

6. Penalty to Be Imposed

Our decisions on violations in the Pipeline OIIs have found that that PG&E committed 3,708 violations, many of them continuing for years, for a total of 18,447,803 days in violation. The Table of Violations for each proceeding is found in Appendix B through D of this decision. Table 3 below summarizes the days in violations by proceeding:

²¹¹ Most of the violations in the Pipeline OIIs were found to have continued for a period of over 50 years. In contrast, most of the violations alleged and stipulated to by PG&E in *Rancho Cordova* ran for slightly more than two years. (See, *Rancho Cordova Decision* at 38-39 & 41, fn. 25 (slip op.).)

Table 3
Number of Violations from Violations Decisions

Proceeding	Number of Days in Violation prior to 1/1/1994	Number of Days in Violation on or After 1/1/94	Total Number of Days in Violation
I.12-01-007 (San Bruno)	27,036	32,219	59,255
I.11-02-016 (Recordkeeping)	206,984	143,205	350,189
I.11-11-009 (Class Location)	6,128,519	11,909,840	18,038,359
TOTAL	6,362,539	12,085,264	18,447,803

Based on our discussion in Section 3.4 above, we have found duplication in two areas. Accordingly, we exclude adopted San Bruno violations 1 and 19, for a total reduction of 19,612 days in violation. Table 4 below reflects the total number of days in violation considered for the purpose of determining the penalty to be imposed on PG&E:

Table 4
Revised Number of Violations

Proceeding	Number of Days in Violation prior to 1/1/1994	Number of Days in Violation on or After 1/1/94	Total Number of Days in Violation
I.12-01-007 (San Bruno)	13,521	26,122	39,643
I.11-02-016 (Recordkeeping)	206,984	143,205	350,189
I.11-11-009 (Class Location)	6,128,519	11,909,840	18,038,359
TOTAL	6,349,024	12,079,167	18,428,191

As noted in Section 4.1 above, the range of fines that may be imposed pursuant to Pub. Util. Code § 2107 ranged from \$500 to \$2,000 per offense prior to 1994; from \$500 to \$20,000 per offense between 1994 and 2011; and from \$500 to \$50,000 per offense after 2011. Even if we exclude the increased maximum fine amount in place after 2011, the range of potential fines that could be imposed in light of the violations is from \$9.2 billion to \$254.3 billion.²¹² Nonetheless, we realize that the amount of the penalty to be imposed must be significantly decreased in consideration of PG&E's financial resources.

Similarly, we take into consideration CPSD and parties' proposals that any penalty imposed should consist of a combination of a fine paid to the state's

²¹² Minimum amount calculated as 18,428,191 violations x \$500 = \$9,214,095,500. Maximum amount calculated as (6,349,024 violations x \$2,000) + (12,079,167 violations x \$20,000) = \$254,281,388,000.

General Fund, a disallowance of rate recovery of certain costs associated with improving PG&E's gas transmission pipeline system and recordkeeping systems, and other remedies. As argued by CSB, the Commission should ease the burden of ratepayers by requiring PG&E's shareholders to bear responsibility for a greater portion of the costs adopted in the *PSEP Decision* to improve PG&E's pipeline system.²¹³ Further, CCSF maintains "payment of a penalty that consists largely of remedial measures will happen over time and thus can be effectively managed with PG&E's other financial needs."²¹⁴ Consequently, CPSD and Intervenors propose that the recommended \$2.25 billion penalty consist of: (1) fines imposed pursuant to Pub. Util. Code §§ 2107 and 2108 ranging from \$300 million to \$900 million, and (2) disallowances/remedies imposed pursuant to Pub. Util. Code §§ 451 and 701 of the remaining balance.

Based on the arguments above, we agree that the penalty imposed should be a combination of fines, disallowances and remedies. In setting the penalty amount, we also take into account the fact that PG&E has been ordered to make certain safety improvements and enhancements at shareholder expense. Since any penalties imposed in this decision will be in addition to disallowances adopted in other proceedings, we must balance the need to set the proper penalty at the appropriate level to deter future violations with the need to ensure that any penalty imposed does not adversely impact PG&E's ratepayers.

In their arguments regarding the amount of disallowances, CSB, TURN and DRA all argue that there is a need to consider the tax benefits PG&E would

²¹³ *CSB Opening Brief* at 8; see also *CCSF Opening Brief* at 16 ("A large payment to the general fund sends a good signal to utilities but beyond that does not contribute to reasonable rates or ensure that needed safety improvements are made.")

receive from any disallowance. TURN estimates that a \$1.0 billion disallowance would result in an actual financial impact to PG&E of approximately \$744 million.²¹⁵ As such, TURN proposed a \$670 million fine to be paid to the General Fund to “cover the lost revenue to the state General Fund resulting from PG&E’s reduced tax liability for unrecovered costs.”²¹⁶ Similarly, CSB states that its proposed \$900 million fine “approximates the value of the federal and state tax deductions available to PG&E for natural gas pipeline safety investments.”²¹⁷ In light of the tax benefits received by PG&E for unrecovered costs, CPSD and Intervenors have proposed that all costs incurred under the *PSEP Decision* be recovered from PG&E shareholders.²¹⁸

PG&E does not dispute that all unrecovered gas pipeline safety costs should be applied to the penalty. However, it argues that its shareholders have already paid, or will incur in the future, unrecovered costs totaling more than \$2.25 billion for gas transmission safety work since the San Bruno explosion and fire.²¹⁹ As such PG&E argues that no further fine is warranted. Moreover, PG&E asserts that there is no legal basis for further disallowances of PSEP costs. PG&E states:

²¹⁴ *CCSF Opening Brief* at 16.

²¹⁵ *TURN Opening Brief* at 9.

²¹⁶ *Reply Brief of The Utility Reform Network on Fines and Remedies (Public Version)*, filed June 7, 2013, at 8.

²¹⁷ *CSB Reply Brief* at 7.

²¹⁸ *CPSD Opening Brief* at 6; *CPSD Amended Reply* at 3; *CSB Reply Brief* at 7; *CCSF Opening Brief* at 17; *TURN Opening Brief* at 8; *DRA Opening Brief* at 19.

²¹⁹ *PG&E Remedies Brief* at 12.

The Commission unanimously ruled that PG&E's PSEP is reasonable and authorized recovery of other PSEP Phase I costs because those costs did not result from unreasonable and imprudent conduct. In so ruling, the Commission rejected claims by DRA and TURN that the Commission should disallow all PG&E's PSEP Phase I costs as the product of past imprudent conduct. ... [T]he Commission has already found the allowed PSEP costs were not the result of such past imprudence, but represent the reasonable cost of the safety enhancements mandated by the Commission in R.11-02-019.²²⁰

The majority of the projects approved in the *PSEP Decision* were to correct recordkeeping shortfalls and implement safety improvements, including pipeline testing and replacement, that had been neglected by PG&E management for decades.²²¹ Thus, to the extent that these projects are to address violations found in these proceedings, we may order that their costs be the responsibility of PG&E shareholders pursuant to Pub. Util. Code §§ 451 and 701. The fact that these remedies had been adopted in a different decision does not change this conclusion. Indeed, as we noted in Section 4.2 above, the *PSEP Decision* contemplated that further disallowances may be warranted based on findings in the Pipeline OIIs and thus made "all ratemaking recovery authorized in today's decision [] subject to refund."²²² There is no requirement that any further disallowances require a finding of imprudence. Rather, we may adopt disallowances as an equitable remedy pursuant to our ratemaking authority under Pub. Util. Code §§ 451 and 701.

²²⁰ *PG&E Response to Amended Brief* at 4.

²²¹ See, e.g., *PSEP Decision* at 55 & 99 (slip op.).

²²² *PSEP Decision* at 4 (slip op.)

The *PSEP Decision* already disallows rate recovery of costs incurred prior to the date of that decision, for the Pipeline Records Integration Program, and for certain pressure-test and pipeline replacement expenditures. These disallowances were approximately \$635,000,000.²²³ We are unpersuaded by PG&E's arguments that "other unrecoverable gas transmission costs in 2013 and beyond" should be counted in any penalties imposed here.²²⁴ Many of the unrecoverable costs identified by PG&E are both outside of the scope of this proceeding and speculative and should be given no weight. Allowing such a blanket inclusion of shareholder costs as part of the penalty in these proceedings, would imply that CPSD could not initiate any future enforcement actions against PG&E for violations associated with operating its gas transmission pipeline system.

We have considered CPSD and Intervenors' arguments regarding further disallowances and find that an additional \$400,000,000 disallowance, associated with PG&E's Pipeline Modernization Program, is warranted. This amount approximates the amount of revenues earned by PG&E's GT&S group in excess of revenue requirements between 1999 and 2010.²²⁵ As CPSD argues, PG&E's actual revenues for GT&S exceeded revenue requirements during that period "as

²²³ In addition to the disallowances, the Commission rejected PG&E's request for a \$380.5 million contingency in the event of cost overruns. (*PSEP Decision* at 97-100 (slip op.)) We do not consider this amount to be a disallowance, since "PG&E's pressure testing cost forecasts are already biased to the high end of the expected cost range and thus include an implicit allowance for unexpected cost overruns." (*PSEP Decision* at 98-99 (slip op.))

²²⁴ *PG&E Remedies Brief* at 12.

²²⁵ *CPSD Opening Brief* at 42. CPSD examined the GT&S revenues between 1999 and 2010 and found that revenues were at least \$435 million higher than the amounts needed to earn PG&E's authorized return. (*Id.*)

a result of cutting back on safety-related expenses, deferring needed maintenance, reducing safety-related workers and choosing less effective pipeline inspection methods.”²²⁶

An example of this shift may be seen in PG&E’s program to replace aging pipeline. In 1985, PG&E implemented the Gas Pipeline Replacement Program (GPRP), which

calls for the replacement of over 2,000 miles of steel transmission and distribution lines and over 800 miles of cast iron distribution main over a 20-year period. According to PG&E, the replacement of these lines will enhance the safety and reliability of the gas piping system and reduce leak repair expenses as high-maintenance piping is eliminated.²²⁷

In 1986, and again in 1992,²²⁸ PG&E was authorized dollars related to the GPRP. However, beginning in the late 1990s, “PG&E has performed risk assessments on its gas transmission pipelines through a Risk Management Program.”²²⁹ Consequently, as noted by CPSD, “[i]nstead of replacing 165 miles of HCA transmission pipeline from 2000-2010, PG&E replaced only 25 miles.”²³⁰

As noted by TURN, PG&E’s recordkeeping shortfalls, including missing and incorrect data in the GIS database, missing pressure test records and failure to track reused and salvaged pipe in its pipeline system, prevented PG&E from properly managing risk and identifying pipe in need of replacement.²³¹ We

²²⁶ CPSD Opening Brief at 42.

²²⁷ *Re Pacific Gas and Electric Company* [D.86-12-095] (1986) 23 Cal.P.U.C. 2d 149, 198.

²²⁸ *Re Pacific Gas and Electric Company* [D.92-12-057] (1992) 47 Cal.P.U.C. 2d 143.

²²⁹ Recordkeeping PG&E’s June 20, 2011 Response at 6C-1.

²³⁰ CPSD Opening Brief at 46 (citation omitted).

²³¹ TURN Opening Brief at 7-8.

believe that this additional disallowance is an equitable remedy for PG&E's failure to replace pipeline as needed to ensure the safe operation of its gas transmission pipeline system as it strikes the appropriate balance of penalizing PG&E for straying from its obligations to maintain and operate its gas transmission pipeline system safely and our determination that "ratepayers should not receive a new pipeline at no cost."²³² Accordingly, PG&E must refund \$400,000,000 to ratepayers, and that amount must be absorbed by shareholders. PG&E shall therefore file a Tier 3 Advice Letter within 45 days after the effective date of this decision to adjust its revenue requirement to reflect this refund.

We decline to make any adjustments to the disallowances to account for any tax benefits that PG&E may receive. In response to Intervenor's comments regarding tax impacts, we had requested further briefing of, among other things, the tax treatment of amounts disallowed.²³³ The comments highlight, however, that it would be difficult to project the actual tax impact of disallowances and that a subsequent proceeding would be necessary to ensure that the actual after-tax consequences were obtained. Our desire is to provide finality of these proceedings with this decision and our companion decisions on violations. Setting a disallowance that would be subject to further litigation and uncertainty would not achieve that objective.

In addition to this further disallowance, we find that a fine of \$950,000,000 should be imposed under Pub. Util. Code §§ 2107 and 2108. As we have discussed in Section 4.1 above, the purpose of a fine is to deter future violation of

²³² *PSEP Decision* at 61 (slip op.).

²³³ *Administrative Law Judges' Ruling Requesting Additional Comment*, filed July 30, 2013, at 4-7.

federal and state statutes and regulations related to gas transmission pipeline safety by PG&E and other pipeline operators. In light of the severity of the offenses, PG&E's conduct before, during and after the San Bruno explosion and the public interest in ensuring that PG&E's natural gas transmission pipeline system is maintained and operated in a safe manner, we find that a fine of this magnitude is necessary to deter future violations. This amount serves to put all gas pipeline operators on notice that there is an absolute need to maintain and operate their pipeline systems in compliance with all federal and state safety requirements and that failure to do so will result in a fine that is not simply a "cost of doing business."

Finally, we adopt specific remedies, as discussed in Section 7 below. These remedies shall be at shareholder expense and are estimated to cost at least \$50,000,000.

Based on the considerations above, we impose a total penalty of approximately \$1,400,000,000, consisting of the following:

Fines (Pub. Util. Code §§ 2107 & 2108)	\$950,000,000
Disallowances (Pub. Util. Code §§ 451 and 701)	\$400,000,000
Remedies	\$50,000,000

These fines and disallowances are in addition to monies PG&E already has been ordered to spend on safety enhancements, as well as future safety investments. That is to say, the penalties adopted in this decision shall not be considered "paid" through prior, current or future pipeline safety investments.

7. Other Remedies

7.1. CPSD Proposed Remedies

CPSD proposes 75 separate remedies in these proceedings: 2 applicable to all three proceedings,²³⁴ 38 applicable to I.12-01-007, 22 applicable to I.11-02-016, and 13 applicable to I.11-11-009.²³⁵ PG&E agrees with many of CPSD's recommended remedies and has "identified operational commitments to achieve them."²³⁶ CPSD accepted certain of PG&E's proposed modifications to the recommended remedies.²³⁷

In general, subject to exceptions discussed below, the remedies proposed by CPSD appear to be well-calculated to address PG&E's practices that led to the extensive and serious violations of safety laws that we have found in these proceedings. In light of these violations, we fully concur with CPSD's assessment that "[t]he extensive shortcomings in PG&E's safety systems and compliance with the law call for extensive changes in their operations."²³⁸ Clearly, remedies such as those proposed by CPSD are both necessary and appropriate in addition to the fine we are imposing on PG&E.

To the extent that CPSD's proposed remedies are uncontested, we adopt them without further discussion. In the following discussion we address the disputed recommended remedies as well as those for which clarification is

²³⁴ CPSD included a third proposed remedy in connection with all three proceedings: "PG&E should apply the remainder of the \$2.25 billion penalty to the PSEP cost and expenses for Phases I and II until it reaches the maximum amount of the penalty." *CPSD Amended Reply*, Appendix A. This proposed remedy is addressed in Section 6 of this decision.

²³⁵ *CPSD Opening Brief* at 58-70.

²³⁶ *PG&E Remedies Brief* at 94.

²³⁷ *CPSD Amended Reply* at 10, Appendixes A and B.

needed. A full statement of the adopted remedies is set forth in Appendix E to this decision. For consistency and clarity, we use the same numbering of remedies used by CPSD and PG&E in their briefs.

Finally, we reiterate that, since these remedies are to cure violations found in the *San Bruno Violations Decision*, *Recordkeeping Violations Decision* and *Class Location Violations Decision*, all remedies are to be paid for by shareholders. We estimate the cost to implement these remedies to be at least \$50,000,000.

7.1.1. CPSD Recommended Remedies in all three Oils

As noted above, CPSD proposes the following two remedies in connection with all three OIIs:

4.A.1 PG&E should pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD, for the cost of verification audits and inspections to ensure compliance with the other remedies. PG&E should also pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD in the near term to provide needed technical expertise as PG&E proceeds with its hydrostatic testing program, in order to provide a high level of technical oversight and to assure the opportunity for legacy piping characterization though sampling is not lost in the rush to execute the program.

4.A.2 PG&E should reimburse CPUC/CPSD for the cost of conducting all three of the present investigations.

PG&E agrees with both proposed remedies. The only contested issue is whether PG&E's proposal to require that CPSD auditors be governed by Government Auditing Standards.

²³⁸ CPSD Amended Reply at 10.

PG&E proposes to modify CPSD recommended Remedy 4.A.1 to provide that “[t]hese auditors should apply the Government Auditing Standards issued by the U.S. Government Accountability Office when conducting their audits.”²³⁹ PG&E also proposes that the Government Auditing Standards be mandated in connection with CPSD recommended remedies 4.C.21 and 4.C.22, which pertain to CPSD audits of PG&E’s recordkeeping practices.

PG&E asserts that the Government Auditing Standards issued by the U.S. Government Accountability Office contain appropriate protocols for conducting recordkeeping audits such as those contemplated by CPSD.²⁴⁰ PG&E notes in particular that the standards call for auditors to (1) identify criteria that are relevant to the audit, (2) obtain and report the views of responsible officials of the audited entity concerning the findings, conclusions and recommendations included in the audit report, and (3) provide a draft report for review and comment by responsible officials of the audited entity and others.²⁴¹

CPSD opposes this proposed requirement.²⁴² CPSD notes that the Government Auditing Standards are designed to audit the government and that they do not contemplate recordkeeping audits.²⁴³ CPSD further notes that “it is within this Commission’s discretion to choose whatever audits it wishes to employ.”²⁴⁴

²³⁹ *PG&E Remedies Brief* at 101-102, Appendix B.

²⁴⁰ *PG&E Remedies Brief* at 101-102.

²⁴¹ *PG&E Remedies Brief* at 102.

²⁴² *CPSD Amended Reply* at 10-11, Appendix A.

²⁴³ *CPSD Amended Reply* at 11.

²⁴⁴ *CPSD Amended Reply* at 11.

PG&E has not shown that the Government Auditing Standards are necessary for CPSD recordkeeping audits; CPSD has shown that they were not designed for the purposes of the audits contemplated by CPSD. Therefore, we will not require CPSD to follow those requirements.

We find CPSD's proposed remedies 4.A.1 and 4.A.2 reasonable. However, we clarify these proposed remedies to make it clear that the reimbursement shall be paid for by PG&E's shareholders.

7.1.2. CPSD Recommended Remedies in I.12-01-007 (San Bruno Oil)

CPSD's 38 recommended remedies in the San Bruno OII, the majority of which are uncontested, address PG&E's pipeline construction standards, integrity management practices, SCADA system, work clearance procedures, emergency procedures, corporate governance (including employee incentives), and the NTSB's recommendations.²⁴⁵ PG&E states it has implemented many of the proposals or is taking steps to do so.²⁴⁶ We therefore find it reasonable to adopt the following uncontested recommendations:

4.B.3 PG&E should perform a complete company-wide record search to populate its GIS database with all identified gas transmission pipeline leak history, including closed leak, information not already transferred to the GIS.

4.B.4 PG&E should revise its Integrity Management training to ensure that missing data is represented by conservative

²⁴⁵ National Transportation Safety Board. 2011. *Pacific Gas and Electric Company Natural Gas Transmission Pipeline Rupture and Fire, San Bruno, California, September 9, 2010*. Pipeline Accident Report NTSB/PAR-11/01. Washington, DC. (NTSB Report). The NTSB Report was received in evidence in the San Bruno OII as Exh. CPSD-9.

²⁴⁶ *PG&E Remedies Brief*, Appendix B at B-1.

assumptions, and that those assumptions are supportable, per the requirements of ASME B31.8S. As required by Ordering Paragraph 1 of D.11-06-017, PG&E should be required to fully document any engineering-based assumption it makes for data that is missing, incomplete or unreliable. Such assumptions must be clearly identified and justified and, where ambiguities arise, the assumption allowing the greatest safety margin must be adopted.

4.B.6 PG&E should revise its threat identification and assessment procedures and training, including its Baseline Assessment Plans, to fully incorporate all relevant data for both covered and non-covered segments, including but not limited to potential manufacturing and construction threats, and leak data.

4.B.7 PG&E should re-label its system MAOP nomenclature in accordance with 49 CFR Part 192.

4.B.10 PG&E should revise its threat identification and assessment procedures and training to ensure that cyclic fatigue and other loading conditions are incorporated into their segment specific threat assessments and risk ranking algorithm, and that threats that can be exacerbated by cyclic fatigue are assumed to exist per the requirements of 49 CFR Part 192.917(b).

4.B.11 PG&E should revise its risk ranking algorithm to ensure that PG&E's weighting factors in its risk ranking algorithm more accurately reflect PG&E's actual operating experience along with generally reflected industry experience.

4.B.12 PG&E should revise its threat identification and assessment procedures and training to ensure that PG&E's weighing of factors in its risk ranking algorithm and the input of data into that algorithm corrects the various systemic issues identified in the NTSB report and the CPSD/PHMSA 2011 Risk Assessment Audit.

4.B.13 PG&E should revise its threat identification and assessment procedures and training to ensure that the proper assessment method is being used to address a pipeline's actual and potential threats.

4.B.15 PG&E should revise its SCADA system to reduce the occurrence of "glitches" and anomalies in the control system that desensitizes operators to the presence of alarms and other inconsistent information.

4.B.16 PG&E should reevaluate SCADA alarm criteria with the goal of reducing unnecessary alarm messages.

4.B.24 Internal coordination – PG&E should revise its procedures to outline each individual Dispatch and Control Room employee's roles, responsibility, and lines of communication required to be made in the event of an emergency either during or outside normal working hours. This should include assigning specific geographical monitoring responsibilities for Control Room employees.

4.B.25 External coordination – CPSD agrees with NTSB recommendation P-11-2, which requests that PHMSA issue guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of control room operators immediately and directly notifying the 911 emergency call center(s) for the communities and jurisdiction in which those pipelines are located when a possible rupture of any pipeline is indicated. CPSD further recommends that prior to such PHMSA guidance PG&E should revise their own procedures to allow for the immediate and direct notification of 911 emergency call centers when a possible pipeline rupture is indicated.

4.B.26 Decision making authority – PG&E should revise its emergency procedures to clarify emergency response responsibilities, especially in regards to authorizing valve shut

offs. PG&E policies should not just delegate authority to act but also detail obligations to act.

4.B.27 RCV/ASV – PG&E should perform a study to provide Gas Control with a means of determining and isolating the location of a rupture remotely by installing RCVs, ASVs, and appropriately spaced pressure and flow transmitters on critical transmission line infrastructure and implement the results.

4.B.28 Response time – PG&E should review required response times in other utility service territories nationwide and devise appropriate response time requirements to ensure that its Emergency Plan results in a “prompt and effective” response to emergencies. PG&E will provide its analysis and conclusions to CPSD.

4.B.29 Emergency Plan Revision – Currently a maintenance supervisor annually reviews SCADA alarm responses and makes revisions as necessary. This process needs to be formalized to ensure a robust feedback loop such that new information is fully analyzed and necessary changes to PG&E’s Emergency Plan and/or other procedures are implemented with a subsequent review of made changes to ensure they are adequate.

4.B.30 Public Awareness – CPSD agrees with NTSB recommendation P-11-1, which requests PHMSA issue guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of sharing system-specific information, including pipe diameter, operating pressure, product transported, and potential impact radius, about their pipeline systems with the emergency response agencies of the communities and jurisdiction in which those pipelines are located. CPSD further recommends that prior to such PHMSA action PG&E undertake a review of its gas transmission public awareness and outreach programs to ensure that system-specific information is appropriately disseminated.

4.B.37 PG&E shall examine internal communication processes to ensure that all employees understand their job responsibilities and priorities. Goals of PG&E gas employees shall describe what is expected of them and their teams.

7.1.2.1. Construction Standards

CPSD and PG&E have largely agreed to recommended Remedy 4.B.1, which, with CPSD's adoption of most of PG&E's proposed edits, provides that "PG&E's pipeline construction standards should meet or exceed all legal requirements and industry standards for identifying and correcting pipe deficiencies and strength testing."²⁴⁷

PG&E would qualify this remedy by adding "relevant" before "legal requirements and industry standards."²⁴⁸ We concur with CPSD's contention that the term "relevant" is subjective and unnecessary, and we therefore exclude the term.

7.1.2.2. Data Gathering Requirements

CPSD's recommended Remedy 4.B.2 pertains to PG&E's data gathering requirements: "PG&E should revise its GTRIMPRMP to robustly meet the data gathering requirements of 49 CFR Part 192.917(b) and ASME-B31.8S, and to do so without limiting its data-gathering to only that data which is 'readily available, verifiable, or easily obtained' by PG&E."²⁴⁹

CPSD states that it accepts PG&E's proposed edits that would change CPSD's original wording from "PG&E should revise section 2 of RMP-06 ..." to

²⁴⁷ CPSD Amended Reply, Appendix A at B-4.

²⁴⁸ PG&E Remedies Brief, Appendix B at B-2.

²⁴⁹ CPSD Amended Reply, Appendix B at 1.

“PG&E should revise its integrity management procedures”²⁵⁰ However, CPSD also proposes without explanation another revision to the remedy so that it reads “PG&E should revise its GTIMRMP”²⁵¹ We find that the phrase “integrity management procedures” conveys more information than either “GTIMRMP” or “GTRIMPRMP” and, therefore, do not accept this revision. This determination also applies to Remedy 4.B.5.

PG&E agrees that its data gathering practices should be reviewed to confirm that they meet or exceed regulatory and industry consensus guidance and revised if necessary.²⁵² However, PG&E proposes to delete the wording “and to do so without limiting its data-gathering to only that data which is ‘readily available, verifiable, or easily obtained’ by PG&E.”²⁵³

The deficiencies in PG&E’s data gathering that were disclosed in these proceedings demonstrate the need for the wording proposed by CPSD. As CPSD notes, inclusion of the language puts PG&E on notice that it is expected to retrieve and organize all of its transmission pipeline records.

7.1.2.3. Documentation of Assessments

CPSD and PG&E agree with respect to recommended Remedy 4.B.8, which reads: “PG&E should permanently cease the self-suspended practice of regularly increasing pipeline pressure up to a ‘system MAOP’ to eliminate the need to consider manufacturing and construction threats. In addition, PG&E should analyze all segments that were subjected to the planned pressure

²⁵⁰ *CPSD Amended Reply*, Appendix A at B-5.

²⁵¹ *CPSD Amended Reply*, Appendix A at B-5.

²⁵² *PG&E Remedies Brief*, Appendix B at B-3.

²⁵³ *PG&E Remedies Brief*, Appendix B at B-3.

increases to determine the risk of failure from manufacturing threats under 49 CFR Part 192.917(e)(3), and perform further integrity assessments as warranted.”²⁵⁴

CPSD proposes to add the following sentence to this remedy: “Each assessment should be documented and retained for the life of the facility.”²⁵⁵ We concur with CPSD that such documentation is necessary. This added requirement is reasonable and will therefore be adopted.

7.1.2.4. Threat Identification and Assessment Procedures

CPSD recommended Remedy 4.B.9 states that “PG&E should revise its threat identification and assessment procedures and training to ensure that HCA pipeline segments that have had their MAOP increased are prioritized for a suitable assessment method (e.g., hydro-testing), per the requirements of 49 CFR Part 192.917(e)(3)-(4).”²⁵⁶ PG&E agrees with implementing this recommendation but proposes to delete “that have had their MAOP increased” following “HCA pipeline segments.”²⁵⁷

CPSD states that it accepts PG&E’s proposed edit.²⁵⁸ However, CPSD’s final recommended remedies do not reflect this agreement.²⁵⁹ Since CPSD accepts this edit, and it appears reasonable on its face, we will adopt it.

²⁵⁴ CPSD Amended Reply, Appendix A at B-9.

²⁵⁵ CPSD Amended Reply, Appendix A at B-9.

²⁵⁶ CPSD Amended Reply, Appendix A at B-10.

²⁵⁷ PG&E Remedies Brief, Appendix B at B-7.

²⁵⁸ CPSD Amended Reply, Appendix A at B-10.

²⁵⁹ CPSD Amended Reply, Appendix B at 2.

7.1.2.5. Equipment Retention Policy

CPSD recommended Remedy 4.B.14 originally stated that “PG&E should make revisions to its equipment retention policy to ensure that integrity of equipment, wiring and documentation and identification of electrical components does not deteriorate to unsafe conditions such as occurred at the Milpitas Terminal, described herein. If PG&E does not have an applicable equipment retention policy then it should formulate one.”²⁶⁰

PG&E states that it is implementing this recommendation and reviewing its inspection, testing, and maintenance procedure applicable to stations to ensure the integrity of electrical equipment, wiring, documentation, and identification of electrical components.²⁶¹ PG&E proposes several edits to CPSD’s proposed language, including deletion of reference to the Milpitas Terminal and deletion of the last sentence.²⁶²

CPSD states that it accepts PG&E’s proposed edits.²⁶³ However, CPSD’s final recommended remedies do not reflect this agreement.²⁶⁴ Since CPSD accepts the edits, and they appear reasonable on their face, we will adopt them.

CPSD also states that it has included language to ensure the procedure is implemented.²⁶⁵ We understand that CPSD is referring to the phrase “and implement” following “PG&E should review.” We concur with CPSD that this provision should be included.

²⁶⁰ *CPSD Opening Brief* at 60.

²⁶¹ *PG&E Remedies Brief*, Appendix B at B-9.

²⁶² *PG&E Remedies Brief*, Appendix B at B-9.

²⁶³ *CPSD Amended Reply*, Appendix A at B-12.

²⁶⁴ *CPSD Amended Reply*, Appendix B at 3.

7.1.2.6. Redundant Pressure Sensors

CPSD recommended Remedy 4.B.17 states that “PG&E should revise its control systems, including SCADA, to ensure that all relevant information, including redundant pressure sensors, is considered.”²⁶⁶

PG&E agrees that its SCADA system should make available all relevant information and states that it is implementing this recommendation through its Valve Automation Program.²⁶⁷ However, PG&E does not agree that all redundant information is necessarily relevant, and it proposes edits to delete “including redundant pressure sensors” and to add a sentence indicating this remedy is being implemented through its Valve Automation Program.²⁶⁸

CPSD opposes PG&E’s proposed edits.²⁶⁹ CPSD asserts that even with the Valve Automation Program, redundant pressure sensor data will be available and should be incorporated into systems including SCADA.²⁷⁰ CPSD asserts that redundant information from alternate sources is both important and relevant in emergency situations.²⁷¹

We note that PG&E does not make the positive assertion that redundant pressure sensor data is irrelevant, only that it is not necessarily relevant. We are therefore persuaded to adopt CPSD recommended Remedy4.B.17 without modification.

²⁶⁵ *CPSD Amended Reply*, Appendix A at B-12.

²⁶⁶ *CPSD Amended Reply*, Appendix A at B-13.

²⁶⁷ *PG&E Remedies Brief*, Appendix B at B-10.

²⁶⁸ *PG&E Remedies Brief*, Appendix B at B-10.

²⁶⁹ *CPSD Amended Reply*, Appendix A at B-13.

²⁷⁰ *CPSD Amended Reply*, Appendix A at B-13.

²⁷¹ *CPSD Amended Reply*, Appendix A at B-13.

7.1.2.7. Additional Pressure Sensors

CPSD recommended Remedy 4.B.18 states that “PG&E should install more pressure sensors and have them closely spaced and use the additional information to incorporate leak or rupture recognition algorithms in its SCADA system.”²⁷²

PG&E states that it agrees with this recommendation and is currently performing a pilot program to test the feasibility of performing real time leak and line break detection using SCADA information.²⁷³ PG&E states that it will review the results of the pilot program before proposing the installation of more pressure sensors system-wide.²⁷⁴ CPSD responds with the assertion that the remedy has merit because PG&E has already begun the pilot program.²⁷⁵

CPSD’s recommendation calls for more sensors and for closer spacing of them but does not include specific, quantifiable standards for doing so.²⁷⁶ This suggests that PG&E would have flexibility in its implementation. We also note PG&E’s testimony in response to this recommended remedy stated that “[w]e have installed and continue to install additional SCADA monitoring and control devices and capability.”²⁷⁷ This testimony did not state that PG&E’s addition of monitoring and control devices and capability is limited to a pilot program. Since PG&E agrees with the recommendation, and we are not persuaded to limit

²⁷² CPSD Amended Reply, Appendix A at B-14.

²⁷³ PG&E Remedies Brief, Appendix B at B-10.

²⁷⁴ PG&E Remedies Brief, Appendix B at B-10.

²⁷⁵ CPSD Amended Reply, Appendix A at B-14.

²⁷⁶ CPSD Amended Reply, Appendix A at B-14.

²⁷⁷ San Bruno Exh. PG&E 1-A at 13A-5.

it to a pilot program, we will adopt CPSD's remedy without the wording changes proposed by PG&E.

7.1.2.8. Negative Pressure Values

CPSD recommended Remedy 4.B.19 states that "PG&E should program its [Power Line Communications] PLCs to recognize that negative pressure values are erroneous and require intervention to prevent valves from fully opening."²⁷⁸

PG&E opposes this remedy.²⁷⁹ PG&E believes that the redundant pneumatic pressure limiting system is the appropriate countermeasure where regulator valves open unintentionally.²⁸⁰ PG&E does not believe that programming PLCs to disregard pressure information is a prudent practice.²⁸¹

In response, CPSD maintains the proposed remedy is appropriate and necessary in light of the problems encountered at the Milpitas Station.²⁸² CPSD takes issue with PG&E's characterization that the goal is to program PLCs to disregard pressure information.²⁸³ Instead, CPSD asserts, the remedy is to program the PLCs to see negative pressure as reason to signal a problem in the system and take the necessary steps to prevent the valves from fully opening.²⁸⁴

As we noted in the *San Bruno Violations Decision*, redundant pneumatically operated monitor valves provide protection against catastrophic failure but are

²⁷⁸ CPSD Amended Reply, Appendix A at B-14.

²⁷⁹ PG&E Remedies Brief, Appendix B at B-10.

²⁸⁰ PG&E Remedies Brief, Appendix B at B-10.

²⁸¹ PG&E Remedies Brief, Appendix B at B-10.

²⁸² CPSD Amended Reply, Appendix A at B-14.

²⁸³ CPSD Amended Reply, Appendix A at B-14.

²⁸⁴ CPSD Amended Reply, Appendix A at B-14.

outside the pressure control system and do not fully provide adequate integrity.²⁸⁵ Thus, we do not share PG&E's confidence that negative pressure values should be disregarded. PG&E's testimony in the San Bruno OII asserted that programming the PLC to disregard pressure information is not prudent.²⁸⁶ However, we do not find that this assertion is adequately substantiated or that the prudence concern outweighs the safety concern that led CPSD to make this recommendation. We therefore adopt the remedy as proposed by CPSD.

7.1.2.9. Replacement of Pressure Controllers

CPSD recommended Remedy 4.B.20 states that "PG&E should replace the three pressure controllers which malfunctioned on September 9, 2010."²⁸⁷ PG&E responds that it is "implementing enhanced functionality to the PLCs at Milpitas Terminal, which will render the valve controllers unnecessary, at which point all valve controllers will be removed."²⁸⁸ PG&E therefore proposes to revise the wording of the remedy to state "PG&E should remove the three pressure controllers..."²⁸⁹

CPSD notes, however, that even though PG&E proposes changes to the Milpitas Terminal, the three controllers could potentially remain in service for years and thereby pose a risk to safety.²⁹⁰ CPSD therefore stands by its proposed

²⁸⁵ *San Bruno Violations Decision*, Section 5.3.2.

²⁸⁶ San Bruno Exh. PG&E-1A at 13A-5 to 13A-6; San Bruno Exh. PG&E-1 at 8-7 to 8-8 and 8-14.

²⁸⁷ *CPSD Amended Reply*, Appendix A at B-15.

²⁸⁸ San Bruno Exh. PG&E-1A at 13-A-6.

²⁸⁹ *PG&E Remedies Brief*, Appendix B at B-11.

²⁹⁰ *CPSD Amended Reply*, Appendix A at B-15.

remedy as stated “unless PG&E demonstrates that the controllers have already been removed from the system.”²⁹¹

We share CPSD’s concern that even though PG&E has plans to remove the controllers that malfunctioned, that might not occur for years. We therefore decline to adopt PG&E’s proposed edit. We will, however, add language to the remedy that incorporates CPSD’s conditional agreement to PG&E’s edits.

7.1.2.10. Abnormal Operating Conditions

CPSD recommended Remedy 4.B.21 states that “PG&E should review its work clearance process to ensure that abnormal operating conditions that may arise during the course of work are anticipated and responses to those conditions are detailed. Additionally, PG&E should create a procedure covering the commission of electrical equipment from one Uninterruptable Power Supply to another. Each project Clearance should include possible scenarios and contingency plans to mitigate any abnormal operating conditions that may arise.”²⁹² This recommended remedy enjoys PG&E’s agreement, and it reflects CPSD’s acceptance of edits proposed by PG&E.²⁹³

The above-quoted language also incorporates two additional, minor clarifying edits to the last sentence that were proposed by CPSD.²⁹⁴ We concur with CPSD’s clarifying addition of “Clearance” since the work clearance process is the subject of this remedy. We also concur with CPSD’s language providing

²⁹¹ *CPSD Amended Reply*, Appendix A at B-15.

²⁹² *CPSD Amended Reply*, Appendix A at B-15.

²⁹³ *CPSD Amended Reply*, Appendix A at B-15.

²⁹⁴ *CPSD Amended Reply*, Appendix A at B-15.

that each clearance should “include” rather than “cover” or “require” possible scenarios and contingency plans. We therefore adopt CPSD’s wording.

7.1.2.11. Work Clearance Procedures

CPSD recommended Remedy 4.B.22 states that “PG&E should revisit its Work Clearance procedures and training to ensure that future work will not be authorized unless: all forms and fields therein are comprehensively and accurately populated, and reviewed by a designated clearance supervisor. Additionally, work should not commence until such time as the operator and technician have reviewed the work clearance and have confirmed that understand the actions to take in the event an abnormal condition is encountered. Lastly, PG&E must ensure that proper records showing the specific steps taken, when taken, and by whom, are maintained pursuant to its Record Retention Schedule.”²⁹⁵

PG&E states that it agrees with and is implementing this recommendation.²⁹⁶ Apart from typographical errors, the language quoted above reflects PG&E’s edits to CPSD’s originally proposed remedy with one exception.²⁹⁷ CPSD otherwise accepts PG&E’s edits.²⁹⁸

In the first sentence, PG&E had inserted “necessary” prior to “forms and fields therein.”²⁹⁹ We concur with CPSD that “necessary” leaves room for subjective determination of what is and is not to be filled out. As CPSD notes,

²⁹⁵ *CPSD Amended Reply*, Appendix A at B-16.

²⁹⁶ *PG&E Remedies Brief*, Appendix B at B-12.

²⁹⁷ *CPSD Amended Reply*, Appendix A at B-16.

²⁹⁸ *CPSD Amended Reply*, Appendix A at B-16.

²⁹⁹ *PG&E Remedies Brief*, Appendix B at B-12.

this could lead to incomplete forms, which was a problem that arose when the Milpitas work clearance form was filled out. We also correct two typographical errors in CPSD's restatement of the remedy by deleting a semicolon after "unless" and adding "both" after "confirmed that."

7.1.2.12. Gas Service Representative Training

CPSD recommended Remedy 4.B.23 states: "Training - PG&E should provide training to Gas Service Representatives to recognize the differences between fires of low-pressure natural gas, high-pressure natural gas, gasoline fuel, or jet fuel."³⁰⁰

PG&E agrees that Gas Service Representatives should be provided training to identify hazards associated with natural gas infrastructure, and to make the system safe for the public and other employees.³⁰¹ PG&E proposes a restated remedy: "Training - PG&E should provide training to Gas Service Representatives [GSR] to identify hazards associated with PG&E natural gas infrastructure and take action to make the condition safe for the public and employees. If assistance is needed and the situation is an imminent hazard, the GSR will remain on site until appropriate resources take control."³⁰²

CPSD opposes PG&E's edits to its remedy, claiming that they "completely alters the purpose of the proposed remedy."³⁰³ CPSD notes that PG&E's proposed language is already included in the company's emergency response

³⁰⁰ *CPSD Amended Reply*, Appendix A at B-17.

³⁰¹ *PG&E Remedies Brief*, Appendix B at B-13.

³⁰² *PG&E Remedies Brief*, Appendix B at B-13.

³⁰³ *CPSD Amended Reply*, Appendix A at B-17.

training and asserts that CPSD's proposed training could easily be incorporated into PG&E's current emergency response training program.³⁰⁴

We note that PG&E does not oppose the training proposed by CPSD and that CPSD does not explicitly oppose the training proposed by PG&E. We will therefore combine both statements into a single restated remedy.

7.1.2.13. PG&E's Business Strategies

CPSD recommended Remedy 4.B.31 states that "PG&E's business strategies and associated programs should expressly ensure that safety is a higher priority than shareholder returns and be designed to implement that priority, which may include reinvesting operational savings into infrastructure improvements."³⁰⁵

PG&E opposes this remedy, asserting that it has already committed substantial shareholder investments to gas transmission improvements.³⁰⁶ PG&E contends that there is no need to adopt an express requirement that any savings from operational efficiencies be reinvested in infrastructure improvements.³⁰⁷ In response, CPSD continues to assert that PG&E should have a program to expressly ensure that safety is a higher priority than shareholder returns.³⁰⁸

We fully concur with the proposition that a public utility should make safety the highest priority, even at the expense of shareholder returns. This reflects our view that the requirement of Pub. Util. Code § 451 to "furnish and

³⁰⁴ *CPSD Amended Reply*, Appendix A at B-17.

³⁰⁵ *CPSD Amended Reply*, Appendix A at B-23.

³⁰⁶ *PG&E Remedies Brief*, Appendix B at B-16.

³⁰⁷ *San Bruno Exh. PG&E 1A* at 13A-11.

³⁰⁸ *CPSD Amended Reply*, Appendix A at B-23.

maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities ... as are necessary to promote the safety ... of its patrons, employees, and the public” is absolute and cannot be compromised by shareholder return considerations. We do not concur with CPSD that the utility’s safety obligation can or should be met by linking necessary safety expenditures and investments to operational efficiencies. PG&E must spend whatever is necessary to meet its safety obligation whether or not operational efficiencies have been achieved. We therefore adopt this remedy without reference to operational savings.

7.1.2.14. Retained Earnings

CPSD recommended Remedy 4.B.32 states that “PG&E should target retained earnings towards safety improvements before providing dividends, especially if the ROE exceeds the level set in a GRC decision.”³⁰⁹ PG&E opposes this remedy, asserting that shareholders have spent and will spend significant funds to improve gas transmission safety without rate recovery.³¹⁰ PG&E also contends that CPSD’s proposed remedy is “vaguely worded” and “would likely have an adverse effect on PG&E’s ability to access debt and equity markets on as favorable terms as other California utilities, potentially increasing its cost of capital.”³¹¹

We make no findings here regarding the amounts PG&E shareholders have spent or will spend on gas transmission work without rate recovery. Nevertheless, we are not persuaded that imposing restrictions on dividends is

³⁰⁹ *CPSD Amended Reply*, Appendix A at B-24.

³¹⁰ *PG&E Remedies Brief*, Appendix B at B-17.

³¹¹ *PG&E Remedies Brief*, Appendix B at B-17.

either necessary to achieve safety or an effective means of doing so. As we noted in Section 7.1.2.13 above, the absolute safety obligation created by Pub. Util. Code § 451 means that PG&E must spend whatever is necessary for safe operations and practices without regard to whether operational savings have been achieved. Similarly, PG&E must ensure safe operations and practices without regard to its dividends policy. Accordingly, we will not adopt proposed Recommendation 4.B.32.

7.1.2.15. Incentive Plan

CPSD recommended Remedy 4.B.33 originally provided that “PG&E’s incentive plan, and other employee awards programs, should include selection criteria for improved safety performance and training and/or experience in the reliability and safety aspects of gas transmission and distribution. PG&E should ensure that upper management attends gas safety training.”³¹²

PG&E responded that it agrees with this recommendation.³¹³ PG&E noted that (1) it has revised its short-term incentive plan (STIP) program to make safety performance 40% of the score used to determine the total award, (2) it endorses the recommendation that upper management participate in activities that enhance and expand their safety knowledge, (3) it continues to enhance its gas emergency response training, and (4) all officers have an opportunity to participate in an annual drill, but it is expanding the number and types of exercises conducted throughout the year.³¹⁴ PG&E proposed edits to the remedy so that it would read “A component of PG&E’s gas employee incentive plan

³¹² CPSD Opening Brief at 62.

³¹³ PG&E Remedies Brief, Appendix B at B-18.

³¹⁴ San Bruno Exh. PG&E 1A at 13-13 to 13-14, Appendix A at 13A-12.

should include safety. PG&E's annual training plan should require that all gas leaders attend gas safety training."³¹⁵

CPSD recommends incorporating PG&E's implementation plan into the remedy and proposes further language revisions to accomplish that.³¹⁶ We concur with CPSD that it is appropriate to codify PG&E's implementation plan by incorporating it into the remedy. This includes in particular the STIP program element that makes safety 40% of the score use to determine the award. We therefore adopt CPSD's proposed modifications to the language of the remedy along with clarifying wording indicated by PG&E.

7.1.2.16. Joint Board Meetings

CPSD recommended Remedy 4.B.34 states that "PG&E should not hold joint Company and Corporation Board of Director meetings as the two entities should have different priorities."³¹⁷ PG&E opposes this remedy, asserting that "the interests of the Company and the Utility are aligned."³¹⁸

CPSD's witness asserted that "[t]he same corporate culture seems to run through PG&E Corporation and PG&E Company, as evidenced in part by the fact that the Corporation and the Company hold joint board meetings."³¹⁹ He also provided evidence that "[i]t is understandable that PG&E Corporation has a goal in growing its financial performance. It is also understandable that PG&E Company focuses on being financially healthy; however, its primary and

³¹⁵ *PG&E Remedies Brief*, Appendix B at B-18.

³¹⁶ *CPSD Amended Reply*, Appendix A at B-25.

³¹⁷ *CPSD Amended Reply*, Appendix A at B-26. CPSD is clearly referring to PG&E Corporation and its subsidiary, Pacific Gas and Electric Company.

³¹⁸ *PG&E Remedies Brief*, Appendix B at B-19.

overarching focus should be on the safe and reliable operation of the electric and natural gas pipeline facilities.”³²⁰ CPSD’s rebuttal testimony went on to assert that “PG&E’s history demonstrates that PG&E Corporation cannot appropriately balance the responsibility for both pipeline safety and maximizing profits. The San Bruno explosion exposed this inherent conflict. Decisions on safety and budgeting were distorted with tragic results.”³²¹ The rebuttal testimony went on to assert that “[t]he Company and the Corporation each serve a conflicting purpose.”³²²

We do not find that the evidence offered by CPSD demonstrates that there is a conflict of interest between PG&E Corporation and PG&E that impacts safety in a way that would be resolved by precluding joint board meetings. Accordingly, we do not adopt this recommended remedy.

7.1.2.17. Safety as Core Mission

CPSD recommended Remedy 4.B.35 initially provided that “PG&E should examine whether the time and money it spends on public relations and political campaigns distracts it from its core mission of providing safe and reliable gas service.”³²³ PG&E’s testimony stated that “[w]hile we do not agree with the premise of this recommendation, ... we are focusing on enhancing public safety

³¹⁹ San Bruno Exh. CPSD-1 at 127.

³²⁰ San Bruno Exh. CPSD-1 at 130.

³²¹ San Bruno Exh. CPSD-5 at 56.

³²² San Bruno Exh. CPSD-5 at 57.

³²³ *CPSD Opening Brief* at 62.

and operational excellence.”³²⁴ PG&E thus opposes this remedy as unnecessary.³²⁵

In response, CPSD modified the wording of its recommended remedy to incorporate PG&E’s statement so that it reads: “PG&E should focus on enhancing public safety and operational excellence as a core mission, and should examine whether the time and money it spends on public relations and political campaigns distracts it from this core mission.”³²⁶

PG&E’s opposition to this remedy is based on its objection to the underlying premise and its position that it is unnecessary. PG&E does not indicate opposition to a self-examination of whether expending resources on public relations and political campaigns is distracting. We are pleased that PG&E is focusing on enhancing both public safety and operational excellence, and are at a loss to understand why it would object to a remedy requiring such focus. We adopt the remedy with the wording changes proposed by CPSD.

7.1.2.18. Pipeline 2020 Program

CPSD recommended Remedy 4.B.36 states that “PG&E should revisit its Pipeline 2020 program, and subsequent variations thereof, to ensure that its implementation is fully flushed out with specific goals, performance criteria, and identified funding sources.”³²⁷ PG&E opposes this remedy and asserts it is unnecessary.³²⁸ The Pipeline 2020 program is no longer active and has been

³²⁴ San Bruno Exh. PG&E 1A, Appendix A at 13A-13.

³²⁵ *PG&E Remedies Brief*, Appendix B at B-19.

³²⁶ *CPSD Amended Reply*, Appendix A at B-26.

³²⁷ *CPSD Amended Reply*, Appendix A at B-26.

³²⁸ *PG&E Remedies Brief*, Appendix B at B-19.

superseded by the PSEP. CPSD has agreed with deleting this remedy,³²⁹ and we therefore do so.

7.1.2.19. NTSB Recommendations

CPSD recommended Remedy 4.B.38 begins with the statement that “CPSD agrees with the following NTSB recommendations to PG&E.”³³⁰ CPSD then lists several recommendations that the NTSB made to PG&E.³³¹

PG&E agrees with and is implementing this recommendation to follow the NTSB recommendations.³³² We wish to make clear that this remedy does not merely note CPSD’s agreement with the NTSB’s recommendations. This remedy directs PG&E to follow and implement them.

7.1.3. Recommended Remedies in I.11-02-016 (Recordkeeping OII)

CPSD proposed 22 recommended remedies in the Recordkeeping OII to ensure “compliance with all applicable rules, regulations and laws related to recordkeeping.”³³³ CPSD, however, warns that while these recommendations are based on evidence in the record, they “are not intended to state all regulatory and engineering requirements for PG&E’s recordkeeping systems.”³³⁴

PG&E proposed revisions to a number of CPSD’s recommendations, which CPSD accepted with no additional changes. Since these recommendations

³²⁹ *CPSD Amended Reply*, Appendix A at B-26.

³³⁰ *CPSD Amended Reply*, Appendix A at B-27.

³³¹ *CPSD Amended Reply*, Appendix A at B-28-32.

³³² *PG&E Remedies Brief*, Appendix B at B-20.

³³³ *CPSD Opening Brief* at 64.

³³⁴ *CPSD Opening Brief* at 64.

and edits were not opposed, we find it reasonable to adopt the following recommendations:

4.C.1 PG&E's gas transmission organization should be required to achieve at least a Level 3 information maturity score under the Generally Accepted Records Keeping Principles within 3 years. (CPSD Exhibit 6, Appendix 4.)

4.C.7 PG&E should identify and document the employees responsible for implementing the Records and Information Management program for gas transmission.

4.C.8 PG&E should develop consistent standard practices that include gas transmission records management linked to corporate policies on information governance.

4.C.10 PG&E should ensure that each gas transmission standard conforms with Records and Information Management (RIM) policies for gas transmission.

4.C.11 PG&E should include the treatment of active and inactive records in its Records and Information Management (RIM) Policy for gas transmission.

7.1.3.1. ISO Certification

CPSD's recommended Remedy 4.C.2 would require PG&E to "achieve International Organization Standard (ISO) certification against ISO 30300 for its Management System for Records (MSR) within five years of the ISO 30300 audit standard being finalized and published."³³⁵ PG&E opposes this recommendation, stating "ISO 30300, which will be a newly revised update to ISO 15489, is primarily used for organizations that have international demands

³³⁵ CPSD Opening Brief at 65.

on information governance, including EU directives and other cross-country requirements.”³³⁶

CPSD argues that the ISO 30300 series is applicable to all organizations, regardless of size or location, and “is especially useful in demonstrating compliance with the documentation and records requirements of other Management System Standards.”³³⁷ Additionally, since the standard has not yet been finalized and published, CPSD suggests “PG&E could begin working toward the ISO 15489 standard currently in place.”³³⁸

Although the *Duller/North Report* refers to the ISO 30300 series in its discussion of records management responsibilities, CPSD has not provided sufficient justification why it is necessary for PG&E to achieve ISO certification against ISO 30300. Accordingly, Recommendation 4.C.2 is rejected. While we reject CPSD’s recommendation at this time, we do not foreclose the possibility that achieving this certification may be appropriate in the future.

7.1.3.2. Corporate Record and Information Management Policy

CPSD recommended Remedy 4.C.3 states

- 3 PG&E should develop a program to draft, review, approve and issue corporate policies and policy guidance that will:
 - a. establish guidance for all departments and divisions to assist them with drafting standard practices to implement the corporate policies,
 - b. will incorporate an internal audit function to review standard practices for compliance, consistency and accuracy, and

³³⁶ CPSD Amended Reply, Appendix A at B-33.

³³⁷ CPSD Amended Reply, Appendix A at B-33.

³³⁸ CPSD Opening Brief at 65, fn.32.

- c. will incorporate a retention policy with a schedule that identifies all records within the business for which there is a retention period mandated by federal/state laws; general orders and regulations including CPUC section 451 and its successors.³³⁹

PG&E generally agrees with this proposed remedy and notes that its Information Management (IM) and Compliance Department has begun to implement this recommendation. However, PG&E proposes several edits, as “It is impractical to draft standard practices that would fit business processes as diverse as Gas Operations, Human Resources and Regulatory Affairs, for example.”³⁴⁰

CPSD accepts PG&E’s proposed revisions with one edit. It proposes to add the phrase “that underlie its post-2010 Corporate Records and Information Management Policy and Standard” to subpart (a) so that it will read:

Communicate recordkeeping expectations that underlie its post-2010 Corporate Records and Information Management Policy and Standard for all departments and divisions across PG&E.”³⁴¹

CPSD’s edit provides the context for PG&E’s recordkeeping expectations. We concur with this edit and adopt recommended Remedy 4.C.3 as follows:

3 PG&E shall issue a corporate policy and standard that will:

3.a Communicate recordkeeping expectations that underlie its post-2010 Corporate Records and Information Management Policy and Standard for all departments and

³³⁹ CPSD Opening Brief at 65.

³⁴⁰ CPSD Amended Reply, Appendix A at B-34 – B-35.

³⁴¹ CPSD Amended Reply, Appendix A at B-34.

divisions across PG&E. These expectations should be incorporated into procedures specific to meet the needs of every Line of Business.

3.b The Information Management and Compliance Department should design a governance controls catalog for recordkeeping practices to assess compliance with the corporate policy and standard, consistency of behavior with official records being stored in approved systems of record, and timeliness of addressing records during their lifecycle.

3.c The retention schedule will support the policy by providing retention length for all identified official records to meet legal and regulatory mandates.

7.1.3.3. Records Management Education and Training

PG&E agrees with CPSD recommended Remedy 4.C.4 that it should develop and implement Records and Information Management (RIM) training. It proposes several edits and also clarifies that the training is “for the gas transmission organization.”³⁴²

CPSD accepts PG&E’s edits, but adds back the phrase “within an information governance framework” that PG&E had proposed be deleted. CPSD explains that this is the basis of Generally Accepted Record-keeping Principles (GARP).³⁴³ Since PG&E agrees to CPSD recommended Remedy 4.C.1, which recommend PG&E achieve a Level 3 information maturity under GARP within three years, we find that retention of the phrase “within an information governance framework” in recommended Remedy 4.C.4 to be reasonable.

³⁴² CPSD Amended Reply, Appendix A at B-36.

³⁴³ CPSD Amended Reply, Appendix A at B-36.

CSB also proposes three remedies – V.D.2.c, V.D.2.d and V.D.2.e – related to records management training.³⁴⁴ PG&E opposes these recommendations on the grounds that they are duplicative of CPSD’s recommended Remedy 4.C.4.³⁴⁵ We do not agree. CPSD recommended Remedy 4.C.4 is a general recommendation for training, while CSB’s proposed remedies outline the expectations of the training and education programs. We find it is reasonable to incorporate CSB’s recommendations into CPSD recommended Remedy 4.C.4, as this will provide more specificity regarding the requirements that should be included. Finally, we modify CSB proposed remedies V.D.2.d and V.D.2.e to add a requirement that these training programs be offered at least annually. We believe that requiring this training be offered at regular intervals will ensure that PG&E’s recordkeeping practices are communicated to employees in a consistent and ongoing manner.

We therefore adopt recommended Remedy 4.C.4 as follows:

4 PG&E shall develop and implement an education and training program for the gas transmission organization in Records and Information Management principles and practices within an information governance framework. The education and training program shall include the following:

- a. All staff shall receive training to understand the responsibilities and tasks that relate to managing records. These education and training programs shall be updated and offered at regular intervals, at least twice annually, to include amendments to the records management program and for the benefit of new staff.

³⁴⁴ CPSD Amended Reply, Appendix A at B-62 – B-63.

³⁴⁵ CPSD Amended Reply, Appendix A at B-62 – B-63.

- b. There shall be specific and additional training for those staff involved directly in the management of retention and disposal of records. These education and training programs shall be offered at least annually.
- c. There shall be specific and additional training focusing on all of the recordkeeping systems used within the Gas Operations Organization. Employees and PG&E contractors who have duties using these programs shall be required to attend these training sessions. These education and training programs shall be offered at least annually.

7.1.3.4. Records

CPSD recommended Remedy 4.C.5 states

PG&E should develop and deploy the systems necessary to manage, maintain, access and preserve both records and documents (physical and electronic, in all formats and media types); their related data, metadata, and geographic location and geospatial content in accordance with legal and business mandated rules, utilizing technology that includes appropriate aids to help improve data and metadata quality, including but not limited to validation, verification and referential integrity.³⁴⁶

PG&E agrees to this recommended, but proposes several edits. CPSD opposes PG&E's proposal to have the recommendation apply to "gas transmission" systems. It argues that "systems" is not limited to gas transmission, as it could also refer to "records/document/content/management systems; Quality management systems at any level in the Corporation."³⁴⁷ CPSD further opposes PG&E's addition to have this recommendation apply in

³⁴⁶ CPSD *Opening Brief* at 65.

³⁴⁷ CPSD *Amended Reply*, Appendix A at B-37.

accordance with “PG&E’s records retention schedule.”³⁴⁸ CPSD believes this phrase is unnecessarily vague and is not convinced the record retention schedule would incorporate the requirements specified in the CPSD remedy.

We agree with CPSD that the phrase “gas transmission” may be limiting and therefore exclude the phrase. We also agree that the phrase “records retention schedule” is vague, especially since there is no assurance that these retention schedules incorporate all the requirements contained in the CPSD recommendation. This phrase is also excluded. Although CPSD did not oppose other edits proposed by PG&E, it did not include them in its final revised proposal. We find PG&E’s other proposed changes reasonable and adopt them.

7.1.3.5. Responsibility for Information Governance Strategies

PG&E agrees with CPSD recommended Remedy 4.C.6 and states that it is already implementing this recommendation in its gas transmission business. However, PG&E proposes edits to clarify the proposed operational commitment for purposes of implementation.³⁴⁹ CPSD agrees that the remedy should be clarified, and proposes further edits that incorporates PG&E’s proposed language. CPSD’s additional edits would identify PG&E senior management as responsible for implementation of PG&E’s governance strategy.³⁵⁰

While we believe that it should be understood that PG&E senior management would be responsible for ensuring PG&E’s governance strategy is implemented, there is no harm in making that specific statement. We therefore, adopt recommended Remedy 4.C.6 as follows:

³⁴⁸ *CPSD Amended Reply*, Appendix A at B-37.

³⁴⁹ *CPSD Amended Reply*, Appendix A at B-38.

³⁵⁰ *CPSD Amended Reply*, Appendix A at B-38.

PG&E shall establish accountability for development and implementation of a PG&E governance strategy across gas transmission that shall rest with PG&E Senior Management and a method of accountability shall be developed and implemented.

7.1.3.6. Mandated Retention Period

CPSD recommended Remedy 4.C.9 states “PG&E should implement mandated retention periods for all relevant records.”³⁵¹ PG&E agrees with this recommendation and proposes to add the phrase “in gas transmission” at the end of the sentence.³⁵²

CPSD accepts PG&E’s edit and makes a further edit to insert the word “relevant” to gas transmission. We agree that this further edit is reasonable and adopt the proposed changes.

7.1.3.7. Records Management Processes

CPSD recommended Remedy 4.C.12 requires PG&E’s records management processes be managed and maintained in accordance with the traceable, verifiable and complete standard.³⁵³ PG&E agrees with this recommendation, which it is already implementing in its gas transmission business. PG&E proposes edits to clarify the proposed operational commitment for purposes of implementation.³⁵⁴

CPSD agrees with some of PG&E’s edits. However, it does not agree that the phrase “for the life of the asset” should be replaced with “aligned with PG&E’s record retention schedule.” It notes that the primary concern of this

³⁵¹ *CPSD Opening Brief* at 66.

³⁵² *CPSD Amended Reply*, Appendix A at B-39.

³⁵³ *CPSD Opening Brief* at 66.

³⁵⁴ *CPSD Amended Reply*, Appendix A at B-40.

remedy relates to the physical assets. CPSD also does not agree to limit the records to just “as built” records because, as “it has been difficult to discern exactly what records PG&E includes in that classification.”³⁵⁵

We concur with CPSD that the phrase “for the life of the asset” should be retained in the remedy. As we found in the *Recordkeeping Violations Decision*, PG&E’s retention schedules were both inconsistent and did not comply with federal requirements to retain certain records for the life of the asset.³⁵⁶ We further agree with CPSD that the term “as-built” should be excluded because it is unclear what PG&E considers an “as-built” record.

We therefore adopt recommended Remedy 4.C.12 as follows:

PG&E’s records management processes shall be managed and maintained in accordance with the traceable, verifiable and complete standard, including retention of physical and digital pipeline records for the ‘life of the asset.’

7.1.3.8. Data Discrepancies

CPSD recommended Remedy 4.C.13 states:

The accuracy and completeness of data within gas transmission records should be traceable, verifiable and complete and when errors are discovered, the record should be corrected as soon as correct information is available and the reason(s) for each change should be documented and kept with the record.³⁵⁷

³⁵⁵ CPSD Amended Reply, Appendix A at B-40.

³⁵⁶ *Recordkeeping Violations Decision*, Section 7.2.1, 8.3 and 9.3.

³⁵⁷ CPSD Opening Brief at 66.

PG&E agrees with this recommendation states that it is implementing this recommendation in its gas transmission business. PG&E proposes edits to the recommendation to discrepancies in GIS 3.0.³⁵⁸

CPSD opposes this edit, as it believes this would limit PG&E to addressing discrepancies in only GIS 3.0, not any other PG&E records. However, it proposes to add a sentence to this recommendation to refer to requirements for discrepancies discovered in GIS 3.0.

We agree with CPSD that this limiting language should be deleted. PG&E has had more than one database system tracking gas transmission records, and will likely have more in the future. It is important that records in all of these systems are accurate and complete, not only the records in GIS 3.0. We do not believe, however, that CPSD's proposed sentence "For example, when discrepancies are discovered in GIS 3.0, GIS 3.0 should be updated as soon as the new information is available and reflected in the audit change log" is necessary and therefore exclude it.

7.1.3.9. Job Files

CPSD proposed remedies 4.C.14 and 4.C.15 address problems associated with Job Files. These recommendations state:

14 PG&E should create a standard format for the organization of a job file so that PG&E personnel will know exactly where to look in a file folder, or set of file folders, to find each type of document associated with a job file. At a minimum, a job file will contain traceable, verifiable and complete records to support the MAOP of the pipeline segment installed; design documentation; purchase documentation showing the sources and specifications

³⁵⁸ CPSD Amended Reply, Appendix A at B-41.

of equipment purchased; permits; environmental documents; field notes; design, construction and as-built drawings; x-ray reports and weld maps; pressure test records; correspondence with the CPUC; and inspection reports and correspondence.

15 Job file data, including drawings, for all parts of the active PG&E gas transmission system should be immediately accessible from multiple locations. The development of a complete and accurate catalog of “job files that can be searched immediately should be included within this objective.³⁵⁹

PG&E agrees with both recommendations. PG&E states that it is implementing recommendation 4.C.14 by creating an electronic format for job file organization and recommendation 4.C.15 through Project Mariner.³⁶⁰ It proposes edits to clarify the proposed operational commitment for purposes of implementation.

For recommendation 4.C.14, PG&E proposes that the job files be in a standard “electronic” format and would limit the records to the “features that were reviewed as part of the MAOP Validation project. Further, it proposes to delete the following types of records listed by CPSD: segment installed, permits, environmental documents, field notes, x-ray reports and weld maps, correspondence with the CPUC and inspection reports and correspondence.³⁶¹

CPSD opposes PG&E’s proposed edits. It argues that Job Files should “include all of the records listed that document the history of the pipeline, including any past, present or future records that support the MAOP of the

³⁵⁹ CPSD Opening Brief at 66.

³⁶⁰ Project Mariner is PG&E’s Gas Transmission Asset Management Project which was authorized in the PSEP Decision.

³⁶¹ CPSD Amended Reply, Appendix A at B-42.

pipeline or pipeline segment installed.”³⁶² Further, CPSD notes that the list of document types included in recommendation 4.C.14 “was developed from lists of job file contents provided by PG&E.”³⁶³

We concur with CPSD that Job Files should include all records documenting the history of the pipeline. PG&E has represented in the Recordkeeping OII that a Job File that contains original documents is the “master job file” or file of record.³⁶⁴ These original documents include permits, environmental documents, x-ray reports and weld maps and inspection reports.³⁶⁵ PG&E witness Keas has testified that Job Files are a source of information for PG&E’s integrity management program and used as a means to confirm information in GIS.³⁶⁶ However, PG&E now proposes that a Job File only contain information obtained as part of the MAOP Validation Project conducted between 2011 and 2013, not historical information. Further, PG&E proposes to eliminate documents that are relevant to the design and construction of transmission pipelines.

As we found in the *Recordkeeping Violations Decision*, PG&E’s recordkeeping practices with respect to Job Files, along with errors in its GIS system, adversely impacted PG&E’s ability to operate its gas transmission pipeline system in a safe manner.³⁶⁷ CPSD’s recommended Remedy 4.C.14

³⁶² CPSD Amended Reply, Appendix A at B-42.

³⁶³ CPSD Amended Reply, Appendix A at B-42.

³⁶⁴ Recordkeeping, Exh. CPSD-18, [GasTransmissionSystemRecordsOII_DR_CPUC_017-Q05Supp.pdf](#).

³⁶⁵ Recordkeeping, PG&E’s June 20, 2011 Response at 2A-19 – 2A-20 (Table 2A-3) & 7-3.

³⁶⁶ Recordkeeping, 11 Joint RT at 1153:7 – 1154:26 (PG&E/Keas).

³⁶⁷ *Recordkeeping Violations Decision*, Section 8.1 and 8.7.

addresses these deficiencies. Therefore, we agree with CPSD that PG&E's proposed edits should be excluded.

For recommendation 4.C.15, PG&E proposes that the word "immediately" be deleted and to limit the scope of Job Files to "records" of gas transmission "pipelines." PG&E further proposes to delete the requirement to have a complete and accurate catalog of Job Files.³⁶⁸

CPSD opposes these edits. It states that the recommendation should apply to PG&E's entire gas transmission system, including terminals, etc., and not just "pipelines." CPSD further notes that it had included a requirement for a catalog of Job Files so the PG&E's staff would "have immediate access to relevant information and not have to wait days or months for the information to be located."³⁶⁹

As we found in the *Recordkeeping Violations Decision*, PG&E does not have a central repository or a system-wide index for Job Files.³⁷⁰ As a result, it took a total of 250,000 man days of work to gather, review, catalogue and index, copy and analyze PG&E's Job Files for all phases of its MAOP validation project.³⁷¹ Given the inherent dangers associated with operating a high pressure natural gas transmission pipeline system, we concur with CPSD that it is imperative that PG&E employees have immediate access to relevant information. It is simply unacceptable to have employees search for information and hope to find it at

³⁶⁸ CPSD Amended Reply, Appendix A at B-43.

³⁶⁹ CPSD Amended Reply, Appendix A at B-43.

³⁷⁰ *Recordkeeping Violations Decision*, Section 8.1.

³⁷¹ *Recordkeeping Violations Decision*, Section 8.1.

some point. As such, we concur with CPSD that PG&E's edits should be excluded.

For the reasons stated above, we adopt CPSD's proposed remedies 4.C.14 and 4.C.15 with no changes.

7.1.3.10. Missing or Destroyed Information

CPSD's recommended Remedy 4.C.16 addresses the methodology to recover information contained in PG&E's historic records and documents that has been identified as "missing" or "disposed of."³⁷² PG&E states that it is implementing this recommendation through its MAOP validation effort. It therefore proposes that this recommendation read:

In the course of the MAOP Validation Project, when PG&E cannot locate records, PG&E should apply conservative assumptions in its development of its Pipeline Features Lists for gas transmission pipelines.³⁷³

CPSD opposes PG&E's proposed edits. CPSD states that these edits "completely ignore the inferred 'duty of care' element to recover such information via a range of options, rather than simply insert a conservative value."³⁷⁴ We agree with CPSD that PG&E cannot simply "apply conservative assumptions" whenever there is missing information in its historical records and documents. However, we note that the CFR allows the use of conservative assumptions. We therefore, reject PG&E's modifications, but modify this recommendation to reflect TURN's recommended Remedy 2A concerning the

³⁷² CPSD Opening Brief at 66-67.

³⁷³ CPSD Amended Reply, Appendix A at B-44.

³⁷⁴ CPSD Amended Reply, Appendix A at B-44.

use of assumed values.³⁷⁵ Accordingly, CPSD recommended Remedy 4.C.16 is revised to read:

16. The information that was contained in PG&E's historic records and documents, and that has been identified as 'missing or disposed of,' and is necessary to be retained for the safe operation of the pipelines, pursuant to laws, regulations and standards and the PG&E retention schedule, shall be recovered. This recovery shall include but not be limited to:

- a. updating and verification of data in engineering databases, such as the leak database, GIS and the integrity management model,
- b. updating plat sheets and other engineering drawings, and
- c. updating and organizing job files.

When PG&E cannot locate records, it may apply conservative assumptions consistent with the requirements of Ordering Paragraph 1 of D.11-06-017. PG&E shall be required to fully document any engineering-based assumptions it makes for data that has been identified as "missing or disposed of." Such assumptions must be clearly identified and justified and, where ambiguities arise, the assumption allowing the greatest safety margin must be adopted.

7.1.3.11. Changes in Gas Transmission Policies and Standard Practices

CPSD's recommended Remedy 4.C.17 addresses the documentation and preservation of changes to PG&E's policies and standards.³⁷⁶ Although PG&E

³⁷⁵ CPSD Amended Reply, Appendix A at B-59.

³⁷⁶ CPSD Opening Brief at 67.

agrees with this recommendation, it would limit the requirement to “gas transmission standards and procedures” and eliminate the requirement for permanent retention. It argues “Permanent retention of all documents is not practicable.”³⁷⁷

We concur with PG&E that this requirement should not apply to all documents. However, we do not agree that a limitation to “gas transmission standards and procedures” is appropriate, as it is unclear what documents would be included. As demonstrated by language in this proposed remedy, CPSD and PG&E have used the terms “standards and procedures”, “policies and standard practices” and “policies, standards and procedures.” It is unknown whether these terms are all the same, or would encompass different types of documents. For purposes of ensuring all documents are included, we revise the recommendation to use the term “policies, standards and procedures.” We further revise the recommendation to apply to all documentation within the Gas Operations Organization.

We further reject PG&E’s proposal to retain only documentation of changes “according to PG&E’s Records and Information Management (RIM) policies, standards and procedures.”³⁷⁸ As highlighted in the Recordkeeping OIL, there is a need to retain policies, standards and procedures even after they are discontinued. For example, PG&E’s standards and procedures for the reconditioning of A O Smith pipe in the late 1950’s and early 1960’s was not retained. Consequently, when the Office of Pipeline Safety issued a safety alert about this type of pipe in 1988, PG&E had to determine what had been done

³⁷⁷ CPSD Amended Reply, Appendix A at B-45.

³⁷⁸ CPSD Amended Reply, Appendix A at B-45.

“based on discussion with people who were involved with the Decoto Pipe Yard reconditioning program” during that time.³⁷⁹ Consequently, adopting PG&E’s proposed retention requirement would not provide the audit trail proposed by CPSD, especially since PG&E believes that an explanation of changes “should be maintained so long as the standard practice is in effect, or for a reasonable, defined period of time.” As such, while it is not necessary to retain a permanent record of all documents, we find CPSD’s proposal to require permanent retention of an audit trail of changes, including cancellation, to be reasonable.

For the reasons discussed above, we adopt recommended Remedy 4.C.17 as follows:

PG&E shall document adoption of, and changes and amendments to policies, standards and procedures within the Gas Operations Organization (or its successor division(s) with responsibility for design, construction, operations, maintenance, testing, safety and integrity management of PG&E’s natural gas pipeline system). The documentation shall include the reasons for adoption, amendment or cancellation of the policies, standards and procedures. An audit trail of changes shall be maintained, retained for as long as the standard is in effect. If a policy, standard or procedure is cancelled, a copy of the policy, standard or procedure in effect at the time of cancellation, as well as the reason for its cancellation, shall be preserved permanently, taking heed of potential changes in technology that may render documents unreadable in the future.

7.1.3.12. Salvaged and Reused Pipe

CPSD proposed remedies 4.C.18 and 4.C.19 address the need to identify and track salvaged and reused pipe in PG&E’s gas transmission pipeline

³⁷⁹ Recordkeeping Exh. PG&E-48 at 2; see also, 4 RT at 498:18 – 499:9.

system.³⁸⁰ PG&E agrees with recommendation 4.C.18 and states that it will identify salvaged and reused pipes through its MAOP Validation Effort. PG&E opposes recommendation 4.C.19 on the grounds that it is duplicative of recommendation 4.C.18.³⁸¹ Similarly, PG&E states that TURN recommended Remedy 1 is duplicative of CPSD proposed remedies 4.C.18 and 4.C.19.³⁸²

CPSD opposes PG&E's proposal to limit the methodology for identifying salvaged and reused pipe to PG&E's MAOP validation effort. It further argues that recommendation 4.C.19 is not duplicative of recommendation 4.C.18. CPSD states that proposed recommendation 4.C.18 concerns identification of salvaged and reused pipe in its system and corrections to GIS.³⁸³ In contrast, recommendation 4.C.19 would require PG&E to create and maintain a separate system to track salvaged and reused pipe in its gas transmission system.³⁸⁴

We agree with CPSD that proposed remedies 4.C.18 and 4.C.19 impose different requirements on PG&E. Recommendation 4.C.18 addresses the fact that PG&E considers the date of pipe installation as the date of manufacture in the GIS system. As such, GIS cannot be used to identify salvaged or reused pipe. Since GIS is a source of data for PG&E's integrity management program, this would mean that PG&E's ability to assess the integrity of its pipeline system and effectively manage risk is compromised, resulting in safety risks to the public.

³⁸⁰ *CPSD Opening Brief* at 67.

³⁸¹ *CPSD Amended Reply*, Appendix A at B-47.

³⁸² *CPSD Amended Reply*, Appendix A at B-58.

³⁸³ *CPSD Amended Reply*, Appendix A at B-47.

³⁸⁴ *CPSD Amended Reply*, Appendix A at B-47.

In contrast, recommended Remedy 4.C.19 addresses the fact that PG&E does not have a means to track where salvaged and reused pipe has been reinstalled in its pipeline system. This system would provide different information than what is currently contained in GIS. We agree with PG&E that TURN recommended Remedy 1 duplicates CPSD recommended Remedy 4.C.19. However, we find TURN's recommendation better addresses the violations found. We therefore reject CPSD recommended Remedy 4.C.19 and adopt TURN recommended Remedy 1 instead. We modify the first sentence of TURN recommended Remedy 1 to read "PG&E shall create a centralized database to track where..." We further modify TURN recommended Remedy 1 to add the following sentence at the end: "PG&E will maintain this database so long as there are sections of reused pipe in the PG&E operating gas transmission pipeline system."

Based on the above, we adopt CPSD recommended Remedy 4.C.18 as follows:

PG&E will identify each section of pipe that has been salvaged and reused within the PG&E gas transmission system. For each section of pipe identified, PG&E will change the installed date in its GIS and its IM model to the date the pipe was originally installed in the PG&E pipeline system.

We adopt TURN recommended Remedy 1, as modified:

PG&E shall create a centralized database to track where it has placed re-used or otherwise reconditioned pipe in its system. For each such segment, the database should show the date of manufacture of the segment, if known. If this date is unknown, the database should so indicate, to ensure that the segment is given appropriate attention in integrity management. The database shall include a link to reliable and readily accessible documentation showing, for each re-used or otherwise

reconditioned pipe segment, that all steps necessary to prepare the segment for installation were performed and inspected. If such documentation is unavailable, the centralized documentation shall so indicate so that the segment will be given appropriate attention in integrity management. PG&E will maintain this database so long as there are sections of reused pipe in the PG&E operating gas transmission pipeline system.

7.1.3.13. Pricewaterhouse Coopers Audit Report Recommendations

CPSD recommended Remedy 4.C.20 requires PG&E to “implement the recommendations included in the final Pricewaterhouse Coopers (PwC) audit report. (TURN Exhibit 16, Appendix B).”³⁸⁵ PG&E opposes this recommendation and states that it has already addressed the PwC recommendations in Exh. PG&E-61 of the Recordkeeping OII.³⁸⁶

CPSD asserts that its proposed remedy should stand because PG&E does not commit that it will implement all of the PwC recommendations, but “merely states that many PwC recommendations are under review or under consideration.”³⁸⁷ We agree with CPSD that PG&E’s statement does not constitute a commitment to implement all of the PwC recommendations, as it gives PG&E discretion over which recommendations should be implemented.

The PwC recommendations are complementary or supplement the remedies proposed by CPSD. We therefore find that these recommendations should be implemented and adopt recommended Remedy 4.C.20.

³⁸⁵ CPSD Opening Brief at 67.

³⁸⁶ CPSD Amended Reply, Appendix A at B-47.

³⁸⁷ CPSD Amended Reply, Appendix A at B-47.

7.1.3.14. Audits

CPSD proposed remedies 4.C.21 and 4.C.22 address CPSD's audit of PG&E's recordkeeping practices and PG&E's correction of any deficiencies found.³⁸⁸ PG&E proposes that these audits be performed in accordance with the Government Auditing Standards. It further opposes CPSD's proposal that audits be performed annually for a minimum of ten years after the final decision is issued in the Recordkeeping OII.³⁸⁹

CPSD opposes both of PG&E's proposals. We have already considered and rejected PG&E's proposal to use Government Auditing Standards issued by the U.S. Government Accountability Office in Section 7.1.1.

We further reject PG&E's proposal that these audits not be performed annually. PG&E argues that an annual audit would not be "practical or useful" because "[t]he steps necessary for audits to be successful (define audit criteria, conduct and audit, discuss findings with PG&E, issue report, PG&E to implement corrective actions in response to findings, allow time for implementation) will take longer than a year."³⁹⁰ However, many of the actions listed are the same as those performed in annual financial audits. Furthermore, as provided in recommended Remedy 4.C.22, CPSD does not anticipate that all deficiencies will be corrected and implemented within a year. Finally, it is up to CPSD to determine whether annual audits are useful, not PG&E.

We therefore adopt proposed remedies 4.C.21 and 4.C.22 as follows:

³⁸⁸ *CPSD Opening Brief* at 67.

³⁸⁹ *CPSD Amended Reply*, Appendix A at B-48 - B-49.

³⁹⁰ *CPSD Amended Reply*, Appendix A at B-48.

21 Using independent auditors, CPSD will undertake audits of PG&E's recordkeeping practices within the Gas Transmission Division on an annual basis for a minimum of ten years after the final decision is issued in I.11-02-016.

22 PG&E will correct deficiencies in recordkeeping discovered as a result of each CPSD audit and will report to CPSD when such deficiencies have been corrected.

7.1.4. Recommended Remedies in I.11-11-009 (Class Location OII)

CPSD proposed 13 recommended remedies in the Class Location OII, all of which were contained in CPSD's Investigative Report.³⁹¹ PG&E did not oppose 7 of these proposed remedies. Additionally, PG&E proposed revisions to 3 of CPSD's recommendations, which CPSD accepted. We therefore adopt the following remedies:

4.D.1 Systems: Utilize industry-standard software for electronic storage of class location information. Devise a process to capture new PG&E service hook-ups especially in proximity to transmission lines and incorporate into the class location analysis.

4.D.3 Procedure 6.3 (3) should be rewritten as "List all new observations regardless if it is believed that the ground crew has already investigated the observation."

4.D.4 TD-4412-07 section 6.1 (2) should include specific language for the pilot to recommended increased patrolling to the Aerial Patrol Program Manager.

³⁹¹ Class Location OII, Exh. CPSD-1, Attachment 17.

4.D.5 Ensure that the Report of New Construction forms are completed.

4.D.6 Increase the duties of the Aerial Patrol Program Manager (APPM) to include oversight and review of the quality and accuracy of patrol reports.

4.D.7 Create a detailed procedures manual containing the APPM's duties to ensure quality control of aerial patrol responsibilities.

4.D.8 Training: Utilize varied training exams for patrolling.

4.D.11 Audits the patrolling process should include a comparison of new construction observations with new gas/electrical hook ups near the line to ensure that new construction has not been missed.

4.D.12 A new item "All Sections of Document Completed" should be added to the audit checklist when reviewing Reports of New Construction.

4.D.13 Audits should make sure that copies of completed Reports of New Construction are being provided to local supervisors as required by standard procedure TD-4127P-01 section 3.8 (5).

7.1.4.1. Patrol Standards

CPSD recommended Remedy 4.D.2 states:

Procedures: Update procedure TD 4412-07 6.2 (4) to require written confirmation to patrollers that follow up has been performed on all new construction that the patroller has previously observed and documented. The same change should

be made to Attachment 7 Item 5 of TD 4412-07, *Aerial Patrolling Process Instructions*.³⁹²

PG&E states that it agrees with the essence of CPSD's recommendation and is in the process of revising its patrol standard to ensure that all patrol observations are properly addressed. Additionally, PG&E states it will use its SAP software to schedule all pipeline patrols and necessary corrective actions.³⁹³ PG&E proposes various changes to this recommendation to clarify the proposed operational commitment for purposes of implementation. Among other things, PG&E proposes deletion of reference to TD 4412-07 and requiring confirmation to Patrol Supervisors, and allowing confirmation to be verbal or written.³⁹⁴

CPSD agrees with some of PG&E's edits, but opposes other. It proposes further edits to the proposed remedy so that it would state:

Procedures: Update procedures, patrolling process instructions, and related OQ training to require written confirmation to Patrol Supervisors that follow up has been performed on all new construction that the patroller has previously observed and documented.³⁹⁵

We find CPSD's revised recommended Remedy 4.D.2 reasonable and accept it. We believe written confirmation will provide assurance that new construction has been considered when evaluating whether to revise class designations. However, we replace the acronym "OQ" to "Operator Qualification" for further clarity.

³⁹² CPSD *Opening Brief* at 68.

³⁹³ CPSD *Amended Reply*, Appendix A at B-51.

³⁹⁴ CPSD *Amended Reply*, Appendix A at B-51.

³⁹⁵ CPSD *Amended Reply*, Appendix A at B-51.

7.1.4.2. Patrolling Exams

CPSD recommended Remedy 4.D.9 would require training exams for patrolling to “include questions with greater detail and complexity than the current exam.”³⁹⁶ PG&E states that it is evaluating a specialized training program and testing regimen utilizing enhanced training exams for patrolling personnel. It proposes that this recommendation be revised to read: “Training materials and associated tests will be reviewed and updated to enhance employee competency, use aerial photos as exam exhibits where pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training materials and associated tests should be reviewed and updated to enhance employee competency, utilize aerial photos and other aids, and reflect field conditions to approximate buildings’ key distances from lines.”³⁹⁷

CPSD opposes PG&E’s proposed deletion. It states that patrolling exams currently contain “fairly simple questions which require only a rudimentary understanding of class locations.”³⁹⁸ Therefore it believes the exams should contain greater detail and complexity. CPSD therefore proposes to retain the language in its originally-proposed remedy, but include PG&E’s additional language. Further, in response to PG&E’s assertion that CSB recommended Remedy V.D.2.g is duplicative, CPSD proposes to add the following language from VD.2.g to the proposed remedy: “and shall use aerial photos as exam

³⁹⁶ CPSD Opening Brief at 69.

³⁹⁷ CPSD Amended Reply, Appendix A at B-55.

³⁹⁸ CPSD Amended Reply, Appendix A at B-55.

exhibits where pilots indicate which structures are approximately 600 feet from the right of way and would require exploring.”³⁹⁹

We concur with CPSD that PG&E’s training exams for patrolling should contain greater detail and complexity to ensure that there is more than a rudimentary understanding of class location. We therefore adopt CPSD’s proposed revised remedy.

7.1.4.3. Aerial Patrol Pilot Training

CPSD recommended Remedy 4.D.10 states

PG&E should consider pilot training using aerial photographs taken at an altitude of 750 feet, which replicates what the pilots see on patrol, and include a number of structures both within and outside of the 660 foot standard. Use the photos as exam exhibits where the pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training should also include a WDA in the exhibit as well.⁴⁰⁰

PG&E agrees with CPSD’s proposed remedy. However, it proposes to delete the use of aerial photographs taken at an altitude of 750 feet and replace it with “photographs, video or other aids to reflect expected views to be seen from typical patrol altitudes.”⁴⁰¹

CPSD does not oppose the language proposed by PG&E. However, it opposes proposed deletion of aerial photographs taken at an altitude of 750 feet.

³⁹⁹ CPSD Amended Reply, Appendix A at B-55.

⁴⁰⁰ CPSD Opening Brief at 69.

⁴⁰¹ CPSD Amended Reply, Appendix A at B-56.

It believes that “PG&E employees may gain a better understanding of the structures and PG&E’s system by using this additional source of information.”⁴⁰²

We concur with CPSD that the Aerial Pilot Training Program should include photographs that replicate what pilots would see on patrol.

Accordingly, we adopt CPSD’s revised proposed remedy which states:

Improve Aerial Patrol Pilot training. PG&E shall consider pilot training using aerial photographs taken at an altitude of 750 feet, which replicates what the pilots see on patrol, and include a number of structures both within and outside of the 660 foot standard. Use the photos as exam exhibits where the pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training shall also include a Well-Defined Area (WDA) in the exhibit as well. PG&E shall also consider using in its training photographs, video or other aids to reflect expected views to be seen from typical patrol altitudes.

7.2. Intervenors’ Proposed Remedies

In addition to the remedies proposed by CPSD, CSB has proposed 6 additional remedies (some with multiple sub-parts), TURN has proposed 4 additional remedies and DRA has proposed 2 additional remedies. We have addressed the following proposed remedies in our discussion of CPSD’s proposed remedies:

1. CSB recommended Remedy V.D.2.a – Incorporated into CPSD adopted Remedy 23 for I.12-01-007.
2. CSB recommended Remedy V.D.2.c – Incorporated into CPSD adopted remedy 4 for I.11-02-016.

⁴⁰² CPSD Amended Reply, Appendix A at B-56.

3. CSB recommended Remedy V.D.2.d – Incorporated into CPSD adopted remedy 4 for I.11-02-016.
4. CSB recommended Remedy V.D.2.e – Incorporated into CPSD adopted remedy 4 for I.11-02-016.
5. CSB recommended Remedy V.D.2.f – Incorporated into CPSD adopted remedy 10 for I.11-11-009.
6. TURN recommended Remedy 1 – Adopted in lieu of CPSD proposed remedy 19 in I.11-02-016.
7. TURN recommended Remedy 2A – Incorporated into CPSD adopted remedy 4 for I.12-01-007.

The remainder of this section addresses all remaining proposed remedies.

7.2.1. California Pipeline Safety Trust

CSB recommended Remedy V.B requests that the Commission direct PG&E to provide an endowment of \$5 million per year over a minimum of 20 years to fund a “California Pipeline Safety Trust” (Pipeline Trust).⁴⁰³ CSB states that the purpose of the Pipeline Trust would be to serve as an independent, pipeline safety organization that would provide “proper oversight over the implementation, not only of PG&E’s PSEP, but the other equitable remedies the Commission imposes in connection with the Line 132 Investigatory Proceedings.”⁴⁰⁴ Additionally, the Pipeline Trust would:

- Ensure that California citizens and emergency responders are represented in policymaking, ratemaking and investigatory proceedings that bear on natural gas safety matters before the Commission;

⁴⁰³ CSB *Opening Brief* at 41 – 42.

⁴⁰⁴ CSB *Opening Brief* at 42 – 43.

- Promote a regional pipeline system in which technology, policy, and practice together provide the safest possible means of transporting gas across California; and
- Promote independent scrutiny of natural gas pipeline investment, maintenance and operations.⁴⁰⁵

CSB argues that the Pipeline Trust is necessary to establish a long-term partnership between local communities, government and industry to improve pipeline safety; increase accountability for intrastate pipeline safety, and; increase awareness of pipeline safety.⁴⁰⁶ It further proposes that PG&E be allowed to seek contribution from other regulated pipeline operators to fund the Pipeline Trust. Additionally, CSB contends that the Pipeline Trust “will serve a role not currently filled by Interveners that regularly appear before the Commission” and “there is not one Intervener in these historic and unprecedented proceedings that advocates solely for public safety.”⁴⁰⁷

PG&E opposes this recommendation. It contends that “any penalty should be directed toward improving pipeline safety” and dedicating any portion of a penalty “to fund an advocacy organization will not address the more immediate infrastructure concerns at the center of these proceedings.”⁴⁰⁸ PG&E therefore believes that in light of the cost of already-identified pipeline safety projects, it would be an inappropriate use of funds.

⁴⁰⁵ CSB Opening Brief at 43.

⁴⁰⁶ CSB Opening Brief at 43.

⁴⁰⁷ *City of San Bruno’s Rebuttal Brief in Response to the Amended Reply Brief of the Consumer Protection and Safety Division on Fines and Remedies and Pacific Gas and Electric’s Response to CPD’s Amended Reply Brief on Fines and Remedies*, filed August 28, 2013, at 10.

⁴⁰⁸ PG&E Remedies Brief at 97.

CSB correctly points out that there is no safety/advocacy counterpart to CPSD.⁴⁰⁹ However, while CSB advocates for the Pipeline Trust, it has provided no specifics on how the Pipeline Trust would be organized or why it needs to be funded by PG&E over 20 years. We note that CSB envisions the Pipeline Trust intervening in Commission proceedings. Under those circumstances, the Pipeline Trust could be subject to the requirements for an intervenor pursuant to Pub. Util. Code § 1801 et seq.

Finally, there is no evidence that there is community support for such an organization. While we do not dispute that such an organization could provide a unique voice and perspective in Commission proceedings, we do not find it appropriate to require PG&E shareholders to fund this work. Therefore, CSB's proposed remedy is rejected.

7.2.2. Independent Monitor

CSB recommended Remedy V.C requests that the Commission direct PG&E shareholders to pay for an Independent Monitor and necessary consultants to evaluate and review PG&E's compliance with the *PSEP Decision*, and any fines and remedies ordered in this decision.⁴¹⁰ DRA makes a similar proposal.⁴¹¹ Both TURN and CCSF support the proposal for an independent third-party monitor.⁴¹² Additionally, TURN proposes the following specific remedies regarding audits to be performed:

⁴⁰⁹ *Rebuttal Brief of the City of San Bruno Concerning the Fines and Remedies to be Imposed on Pacific Gas and Electric Company*, filed June 7, 2013, at 24.

⁴¹⁰ *CSB Opening Brief* at 43.

⁴¹¹ *DRA Opening Brief* at 38 – 39.

⁴¹² *TURN Opening Brief* at 49; *CCSF Opening Brief* at 17.

2B With respect to the MAOP Validation Project, PG&E should pay for the costs of a qualified independent auditor, retained by the Commission, to: (a) audit PG&E's MAOP Validation results for accuracy, reliability, and compliance with the requirements of D.11-06-017, and (b) to prepare a full report to the Commission and available to interested parties of its conclusions and recommendations for remediation of any observed deficiencies.

3 With respect to Project Mariner, PG&E should pay for the costs of a qualified independent auditor, retained by the Commission, to (a) examine the new systems developed in Project Mariner, including observations of the systems in operation, to ensure that they result in accurate, reliable, and accessible pipeline data that meets all safety operational needs, and (b) to prepare a report to the Commission and available to interested parties of its conclusions and recommendations for remediation of any observed deficiencies.⁴¹³

Noting that "CPSD is the Commission's staff responsible for safety enforcement," PG&E opposes this proposed remedy.⁴¹⁴ PG&E states that it "recognizes that CPSD's resources are limited and that adding substantial management and oversight obligations to its existing duties could outstrip available resources."⁴¹⁵ PG&E proposes that instead of creating an independent monitor, the Commission should provide CPSD with additional resources by ordering that a portion of the penalty in this proceeding be used to fund consultants retained to assist CPSD in managing and overseeing PSEP

⁴¹³ *TURN Opening Brief* at 49.

⁴¹⁴ *PG&E Remedies Brief* at 95-96, Appendix B at B-41.

⁴¹⁵ *PG&E Remedies Brief* at 96.

activities.⁴¹⁶ This would continue a practice that has been followed for two years whereby such consultants would be identified, hired, and directed by CPSD but funded by PG&E.⁴¹⁷

CSB and DRA discuss their proposals for an independent monitor and the rationales therefore at length in their briefs.⁴¹⁸ However, the essence of their argument is that an independent monitor is required because CPSD is not positioned to adequately fulfill its regulatory role in overseeing the safety of PG&E's natural gas safety practices and operations, including in particular the company's implementation of PSEP and its compliance with the remedies ordered in these investigation proceedings. For evidence of this proposition, DRA points to the findings of the Independent Review Panel (IRP) regarding the cultures of the Commission as well as PG&E.⁴¹⁹ DRA also points to the NTSB Report's finding that the Commission's "failure to detect the inadequacies of PG&E's pipeline integrity management program" contributed to the San Bruno explosion.⁴²⁰ DRA goes on to note the NTSB's finding that the Commission is unable to effectively evaluate and assess the integrity of PG&E's pipeline system because neither PG&E nor the Commission has incorporated the use of effective and meaningful metric as part of their performance-based pipeline safety

⁴¹⁶ *PG&E Remedies Brief* at 96.

⁴¹⁷ *PG&E Remedies Brief* at 96.

⁴¹⁸ *CSB Opening Brief* at 43-49; *DRA Opening Brief* at 36-40; *CSB Rebuttal Brief*, filed June 7, 2013, at 21-24; *DRA Rebuttal Brief*, filed June 7, 2013, at 19; *CSB Rebuttal Brief in Response to Amended Reply Brief of CPSD*, filed August 28, 2013, at 7-9.

⁴¹⁹ *DRA Opening Brief* at 37-38, citing the IRP Report at 8 and 18-22. The IRP Report is San Bruno Exh. CPSD-10.

⁴²⁰ *DRA Opening Brief* at 38, citing the NTSB Report at xii. The NTSB Report is San Bruno Exh. CPSD-9.

management programs.⁴²¹ CSB similarly notes the IRP finding that CPSD lacks adequate resources⁴²² and the NTSB finding that an ineffective enforcement posture on the part of CPSD allowed PG&E's organizational failures to continue for decades.⁴²³

The evidence from the IRP and NTSB reports shows that in the years leading to the San Bruno disaster, the Commission, including CPSD, did not meet all reasonable expectations for its oversight of PG&E's gas transmission safety. However, it does not follow from evidence of past shortcomings that CPSD cannot or will not fulfill its mission if provided with adequate resources. In particular, there is no record evidence that CPSD is stuck in the culture of the past. Moreover, the Commission and CPSD are designated by law as the exclusive California regulator of the safety of PG&E's natural gas transmission system facilities, operations and practices. The Commission's safety jurisdiction cannot be delegated, and an independent monitor established to augment CPSD's role is no substitute for, and does not obviate the need for, a properly resourced, trained, and tasked CPSD.

We also find shortcomings in the current proposals for an independent monitor: Parties have pointed to the use of independent monitors elsewhere as examples that might be followed here, such as the independent monitors established in settlements of the BP oil spill in Alaska in 2006, the 1999 rupture of a Shell and Olympic Oil pipeline, and the 2000 Carlsbad accident. However, those were settled matters where the party to be monitored consented to be

⁴²¹ *DRA Opening Brief* at 38, citing the NTSB Report at 126, Finding 25.

⁴²² *CSB Opening Brief* at 44-45, citing the IRP Report at 5.

⁴²³ *CSB Opening Brief* at 45, citing the NTSB Report at 122.

monitored and, moreover, was not subject to comprehensive regulatory oversight such as this Commission exercises. Moreover, parties have not pointed to evidence of the effectiveness, or lack thereof, of such independent monitor programs or what the costs were or would be for an independent monitor here. Further, no party has provided adequate information that would allow us to adopt an independent monitor program without further consideration. DRA acknowledges this by proposing further proceedings in the form of a comment process to implement its proposal.⁴²⁴

Rather than establish an independent monitor program to address the resource constraints and organizational issues identified by the IRP and the NTSB, the more appropriate course is to ensure that CPSD has adequate resources to oversee compliance with the adopted remedies and to oversee PSEP implementation. Adopted Remedy 1 for all three OIIs directs PG&E to reimburse CPSD for the costs of contracts to retain independent experts chosen by CPSD for verification audits and inspections to ensure compliance with other remedies. We clarify here that this includes ensuring compliance with the *PSEP Decision* and all remedies ordered in this decision, including CPSD's costs for hiring qualified independent auditors to audit and issue reports for both PG&E's MAOP Validation results and Project Mariner systems as proposed by TURN. If CPSD determines that it needs the services of outside consultants to develop additional capabilities to evaluate and assess the integrity of PG&E's pipeline system through the use of meaningful metrics, then the costs of such consultants would fall within the scope of this remedy.

⁴²⁴ *DRA Opening Brief* at 39.

We note that while the *PSEP Decision* provided a funding mechanism for carrying out the directives in that decision subject to balancing account treatment for recovery from ratepayers,⁴²⁵ the directives in this decision are remedies in consideration of violations of gas safety laws by PG&E. Accordingly, the reimbursement costs that PG&E incurs pursuant to this order are not eligible for recovery from ratepayers. The PSEP Decision capped the reimbursement obligation in that decision at \$15,000,000.⁴²⁶ At this time we will cap the reimbursement penalty ordered by this remedy at \$30,000,000. If CPSD determines that additional funding is required to carry out this remedy, it may file a petition for modification of this decision seeking additional reimbursement obligation on the part of PG&E.

Finally, we direct CPSD to present a proposal to the Commissioners within 60 days of the effective date of this decision to perform the MAOP Validation and Project Mariner audits, and the timing for such audits to occur.

7.2.3. Peninsula Emergency Response Fund

CSB recommended Remedy V.D.1 requests that the Commission direct PG&E shareholders to pay \$150 million over three fiscal years in equal installments that would be placed in a trust for a newly established Peninsula Emergency Response Fund (Response Fund).⁴²⁷ CSB states that the Response Fund would assist cities on the Peninsula in San Mateo County and focus on enhancing the Peninsula's emergency preparedness and response. CSB further

⁴²⁵ *PSEP Decision*, Ordering Paragraph 9 at 128.

⁴²⁶ *PSEP Decision*, Ordering Paragraph 9 at 128.

⁴²⁷ *CSB Opening Brief* at 50.

proposes that the Response Fund provide funding for certain fire, emergency response, police or sheriff buildings, facilities, and/or equipment.

Similar to its arguments opposing the Pipeline Trust, PG&E does not believe it is appropriate to designate a portion of penalty funds for the Response Fund, since the proposed use of these amounts “will neither increase pipeline safety nor have an impact outside a limited area.”⁴²⁸ Additionally, PG&E notes that it has already paid \$70 million to establish a non-profit entity directed by the City of San Bruno, and an additional \$50 million to a trust for the benefit of the City.

While the CSB was directly impacted by the September 9, 2010 explosion and fire, most of the violations found in these proceedings affect ratepayers and residents throughout PG&E’s service territory. San Bruno has not provided sufficient justification why a fund should be established solely to assist cities on the Peninsula in San Mateo County. In light of the impact of this remedy on a limited area, we reject CSB’s proposed remedy.

7.2.4. Training for Emergencies

CSB recommended Remedy V.D.2.b states that PG&E should

Provide training to its Gas Service Representatives and Gas Control Operators to ensure that they coordinate effectively with emergency responders, follow PG&E’s own internal procedures when responding to emergencies, and each GSR Gas Control Operators shall be trained and able to manually shut off valves. PG&E shall also audit its GSRs and Gas Control Operators annually to ensure that they are properly trained.⁴²⁹

⁴²⁸ *PG&E Remedies Brief* at 97.

⁴²⁹ *CSB Opening Brief* at 51.

PG&E agrees with this proposed remedy except that it contends that annual auditing to ensure proper training is impractical and unnecessary.⁴³⁰ PG&E also proposes clarifying wording changes so that the remedy reads as follows:

PG&E shall provide training to its Gas Service Representatives and Gas Control Operators to ensure that they coordinate effectively with emergency responders, follow PG&E's own internal procedures when responding to emergencies, and each GSR under Gas Control Operators' direction should be trained and able to manually shut off emergency shutdown zone valves. PG&E should also audit its GSRs and Gas Control Operators to ensure they are properly trained.⁴³¹

We are not persuaded that annual auditing is necessary to ensure that GSRs and Gas Control Operators are properly trained. Accordingly, we adopt this remedy with the revisions proposed by PG&E.

7.2.5. Formal Agreement with Agencies in PG&E's Territory

CSB recommended Remedy V.D.3 requests the Commission

require PG&E to formalize its emergency response role and disclosure obligation with each city, county and fire district in its service territory either through a memorandum of understanding (MOU) or by reforming PG&E's franchise agreements to make them conform to the public interest in protecting property used by the franchisee and responding to threats or catastrophes quickly and efficiently.⁴³²

⁴³⁰ *PG&E Remedies Brief*, Appendix B at B-42.

⁴³¹ *PG&E Remedies Brief*, Appendix B at B-42.

⁴³² *CSB Opening Brief* at 52.

CSB maintains that this remedy is necessary because “[l]ocal governments cannot trust PG&E to do what’s necessary to protect its customers.”⁴³³ It proposes that this formal agreement “would allow local communities to require PG&E to provide them with the information and support they need to protect the public welfare and effectively respond in an emergency.”⁴³⁴ This agreement would also give local communities the option to specify PG&E’s emergency response role and obligations, so that failure to meet these obligations would be considered a breach of contract, and hold PG&E strictly liable for any pipe or facility failure regardless of cause.⁴³⁵

PG&E opposes this recommendation. It argues that CSB’s proposal “could impose through contract broad, additional quasi-regulatory mandates and potentially unlimited cost exposures that would fundamentally change the utility-ratepayer relationship, to the detriment of both.”⁴³⁶ “Shifting the regulatory balance to place additional, poorly-defined liabilities onto a utility, as San Bruno’s proposal would do, is contrary to the public interest and would inevitably result in adverse consequences to both the utility and all its ratepayers.”⁴³⁷ Finally, PG&E maintains that any effort by the Commission to modify PG&E’s contractual franchise agreements with local governments would be in violation of the Contract Cause.⁴³⁸

⁴³³ CSB Opening Brief at 52.

⁴³⁴ CSB Opening Brief at 53.

⁴³⁵ CSB Opening Brief at 53-54.

⁴³⁶ PG&E Remedies Brief at 98.

⁴³⁷ PG&E Remedies Brief at 98.

⁴³⁸ PG&E Remedies Brief at 98-99.

We agree with CSB that PG&E must formalize its emergency response and disclosure obligations with each and every city, county and fire district in its service territory. In *San Bruno Violations Decision*, we found that PG&E had violated 49 CFR 192.615(a)(8) for failing to notify the appropriate first responders of an emergency and coordinate with them.⁴³⁹ Further, we had found a violation of 49 CFR 192.615(a)(2) for failing to establish and maintain adequate means of communication with the appropriate fire, police and other public officials during the San Bruno explosion and fire.⁴⁴⁰

Many of the reasons identified by CSB for adopting this recommendation have already been addressed in remedies proposed by CPSD.⁴⁴¹ However, these remedies do not require PG&E to formalize its emergency response and disclosure obligations to cities, counties and fire districts. We agree with CSB that these obligations should be provided to cities, counties and fire districts in writing. However, we do not agree that this should be achieved through a memorandum of understanding or by modifying existing franchise agreements. As CSB notes, PG&E's Emergency Plan already contains a section for "external mutual assistance agreements."⁴⁴² Enforcement of these mutual assistance agreements lies with the Commission, not the individual cities, counties or fire districts. We therefore direct PG&E to enter into such agreements with the individual cities, counties or fire districts by no later than December 2015. These

⁴³⁹ *San Bruno Violations Decision*, COL 44 (Violation 27).

⁴⁴⁰ *San Bruno Violations Decision*, COL 44 (Violation 29).

⁴⁴¹ See CPSD adopted Remedies 4.B.25, 4.B.26 and 4.B.30.

⁴⁴² *CSB Reply Brief* at 29.

mutual assistance agreements shall be maintained in the appropriate Division Emergency Plan.

7.2.6. Automatic Shutoff Valve Pilot Program

CSB proposed remedy V.E requests the Commission direct PG&E to install automated valves with automatic capabilities (ASVs)⁴⁴³ in all HCAs and undertake an ASV pilot program within six months of the issuance of this decision.⁴⁴⁴ CSB proposes that the pilot program should be specifically calculated to fully resolve any remaining policy and technological issues associated with deployment of ASV devices and pave the way for ASVs or their true equivalent (i.e., not remote control valves) in terms of response time capability to be deployed by PG&E and operational in all HCAs in the utility's service territory on an expedited basis.⁴⁴⁵

PG&E supports automated valves in its gas transmission system and notes that its PSEP includes the installation of 300 automated valves, but it opposes this recommendation, noting that automated safety valve implementation is addressed in the PSEP in R.11-02-019.⁴⁴⁶

A remote control valve (RCV) can be operated remotely from a control room distant from the actual valve, whereas an ASV is designed to stop the flow of gas, without human intervention, when established criteria are met.⁴⁴⁷ The main benefit of an ASV or RCV over a manually operated valve is that a rupture

⁴⁴³ Parties have also used the term "automated safety valve" and "automatic shutoff valve" when referring to ASVs.

⁴⁴⁴ *CSB Opening Brief* at 54.

⁴⁴⁵ *CSB Opening Brief* at 54-55.

⁴⁴⁶ *PG&E Remedies Brief* at 99, Appendix B at B-44.

may be isolated sooner, limiting the amount of natural gas release after a rupture has occurred.⁴⁴⁸ Major concerns regarding ASVs are that they may trigger and close when closure criteria are met but no emergency condition exists, although newer ASVs have the ability to send an alarm before tripping and closing, giving the operator an option to review operating data before deciding whether to allow or cancel imminent valve closure.⁴⁴⁹ The vast majority of injuries, fatalities, and property damage associated with a catastrophic pipeline incident occur within the first few minutes of the event, well before activation of ASVs or RCVs is possible.⁴⁵⁰

In approving PG&E's PSEP, including the company's plan to replace, automate, and upgrade 228 valves in Phase 1 of the Implementation Plan, the Commission stated that

We share the parties' objective of reliable and automatic shut-off valves. We direct PG&E to continue its review of new designs and operational options to allow for expanded use of automated valves. In its next rate case, PG&E must submit an updated showing of then-current best practices within the natural gas pipeline industry for automated shut-off valves. PG&E must also continue to improve its gas system control room operation due to the critical role it plays in addressing a rupture or functioning as the manual override on automatic valves. PG&E must avoid unnecessarily complicating natural gas system operations with unpredictable technology, and at the same time develop knowledgeable and fast-acting human control to enhance system safety. The Independent Panel recognized that remote controlled

⁴⁴⁷ San Bruno Exh. CPSD-1 at 104.

⁴⁴⁸ San Bruno Exh. CPSD-1 at 104.

⁴⁴⁹ San Bruno Exh. CPSD-1 at 104.

⁴⁵⁰ San Bruno Exh. CPSD-1 at 105.

and/or automated shut-off valves are a major issue for the pipeline industry, with the safety and reliability trade-offs discussed at length in Appendix L to their report. [Footnote Omitted.] PG&E should monitor the development of this issue in the pipeline industry.⁴⁵¹

CSB points to evidence that RCVs would not have been as effective as ASVs on September 9, 2010 in San Bruno.⁴⁵² Still, the record evidence in this proceeding shows that there are remaining concerns with ASVs that must be addressed, and it does not provide a basis for us to depart from the plan for PG&E's system going forward that the Commission adopted in D.12-12-030. Accordingly, we do not adopt CSB's proposed remedy for ASVs.

7.2.7. Incentive Program Modifications

Concerned that PG&E's employee incentive program links employee financial reward to shareholder return, CSB requests the Commission direct PG&E to revise its Long-Term Incentive Plan (LTIP) and its Short-Term Incentive Plan (STIP) such that safety is the single largest factor that determines employee financial rewards (proposed remedy V.F.).⁴⁵³

PG&E opposes this remedy as duplicative of CPSD recommended Remedy 4.B.33, which we have adopted as discussed in Section 7.2.1.15 above.⁴⁵⁴ PG&E also argues, however, that it is not appropriate to modify the LTIP.⁴⁵⁵

⁴⁵¹ *PSEP Decision* at 76-77 (slip op.).

⁴⁵² CSB Rebuttal Brief at 26-27, citing October 2, 2012 Jt. Hearing Tr. At 200-201.

⁴⁵³ *CSB Opening Brief* at 55.

⁴⁵⁴ *PG&E Remedies Brief*, Appendix B at B-44.

⁴⁵⁵ *PG&E Remedies Brief*, Appendix B at B-44.

Since CPSD remedy 4.B.33 incorporates PG&E's revised STIP, for which safety performance now accounts for 40% of the score used to determine the total award, this proposed remedy is duplicative with respect to the STIP. However, CSB's recommendation for the LTIP is not duplicative. Nevertheless, we do not find that CSB has produced or referred us to record evidence that would enable us to make findings in support of modifying PG&E's LTIP. Accordingly, we do not adopt this proposed remedy.

7.2.8. Implementation of NTSB Recommendations

DRA proposes that the Commission "conduct a comprehensive audit of all aspects of PG&E's operations, including control room operations, emergency planning, record-keeping, performance-based risk and integrity management programs and public awareness programs" as recommended by the NTSB in its report on the San Bruno explosion.⁴⁵⁶

DRA's recommendation is directed at the Commission, not PG&E. We agree with the NTSB's recommendation that a comprehensive audit of all aspects of PG&E's operations should be performed. Therefore, we direct CPSD to present a proposal to the Commissioners within 60 days of the effective date of this decision to perform such an audit, and the timing for such audit to occur.

⁴⁵⁶ DRA Opening Brief at 5, citing *National Transportation Safety Board Pipeline Accident Report of Pacific Gas and Electric Company Natural Gas Transmission Pipeline Rupture and Fire, San Bruno, California, September 9, 2010* (NTSB/PAR-11/01), adopted August 30, 2011, at 130.

7.2.9. Compensation to All Intervenors

DRA proposes that the Commission require PG&E shareholders to compensate TURN, CSB, CCSF, and DRA, for their litigation costs, including expert witness fees.⁴⁵⁷ PG&E did not respond to this recommendation.

In adopted CPSD Remedy A.2, PG&E agreed that its shareholders would pay the Commission's and CPSD's costs of conducting the Pipeline OIIs. DRA's proposed remedy seeks to expand this to include all Intervenors.

Generally, compensation for participation in Commission proceedings is governed under the Commission's Intervenor Compensation Program.⁴⁵⁸ However, intervenors who are eligible to receive compensation under the program must be a "customer"⁴⁵⁹ and the compensation award would be funded by utility ratepayers.⁴⁶⁰ Under the Intervenor Compensation Program, only TURN would be eligible to be compensated for its participation in these proceedings. However, we do not find such an outcome to be equitable.

In the San Bruno and Recordkeeping OIIs, we sought participation from interested parties and stated

The Commission invites interested parties to participate actively in this formal investigation, as it involves safety matters important on a local, state, and national basis. Participation by informed parties can facilitate the Commission reaching a decision that is both informed and fair.⁴⁶¹

⁴⁵⁷ *DRA Opening Brief* at 5.

⁴⁵⁸ *See*, Pub. Util. Code § 1801 et seq.

⁴⁵⁹ *See*, Pub. Util. Code § 1802(b) (defining "customer").

⁴⁶⁰ Pub. Util. Code § 1807.

⁴⁶¹ Recordkeeping OII at 9; *see also*, San Bruno OII at 9-10.

TURN, CSB, CCSF, and DRA have all actively participated in these proceedings and have contributed substantially to our decisions on violations, as well as this decision. Given the nature of these proceedings, we do not believe it would be equitable for utility ratepayers to pay for intervenor's litigation costs, nor to limit compensation to a single intervenor. Rather, we find that we should assert our authority under Pub. Util. Code § 701 and order PG&E shareholders to compensate TURN, CSB, CCSF, and DRA for their reasonably-incurred litigation expenses, including the expert witness fees, in connection with these three proceedings.

Pub. Util. Code § 701 states that the Commission "may do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction." Although the Commission's authority under this statute is to be liberally construed, these additional powers and jurisdiction "must be cognate and germane to the regulation of public utilities."⁴⁶² There is no doubt that ensuring the provision of safe utility services is cognate and germane to the regulation of public utilities. To that end, Intervenors have provided testimony and evidence that assists us in reaching our decisions in these three proceedings.

Accordingly, we adopt DRA's recommendation and require PG&E shareholders to pay all reasonably-incurred litigation expenses, including the expert witness fees, in connection with these three proceedings for CSB, DRA, TURN and CCSF. This would include expenses incurred from the initiation of the proceedings through the effective date of this decision.

⁴⁶² CLAM 25 Cal. 3d at 305-306 (citation omitted).

8. Compliance Filing

It is likely that some of the remedies adopted here have already been implemented in response to mandates by the National Transportation Safety Board, the Pipeline and Hazardous Materials Safety Administration, the Blue Ribbon Panel or decisions issued in Rulemaking 11-02-019. It is not our intent to duplicate remedies. Therefore, PG&E shall file a Compliance Filing in these dockets, which:

1. Identifies the remedies ordered in this decision that have already been ordered elsewhere, where that remedy (decision, report, etc.) was ordered, and PG&E's progress to date in complying with that remedy.
2. Identifies any remedy ordered in this decision that modifies or eliminates any remedies ordered elsewhere

Further, PG&E shall include a timeframe for completion of each of the remedies adopted in Appendix E of this decision. This Compliance Filing shall be filed within 60 days of the date this decision is issued.

9. Transcript Corrections

PG&E proposes various corrections to the March 4 & 5, 2013 Transcripts.⁴⁶³ No parties have opposed PG&E's corrections and they are hereby accepted.

10. Confirmation of Rulings

As expected from proceedings of this complexity and high level of contention, parties have made numerous requests and filed a large number of motions. The assigned ALJs have issued filed, electronic and oral rulings in response to these motions. This decision confirms all rulings.

⁴⁶³ *PG&E Remedies Brief*, Appendix D.

On July 28, 2014, CSB filed two motions. One of these motions, concerning CSB's motion for Commissioner Peevey's recusal, has been addressed by separate ruling. CSB's *Motion of the City of San Bruno for An Order to Show Cause Why Pacific Gas and Electric Company Should not be Held in Violation of Commission Rule of Practice and Procedures 8.3(b) (Rule Against Ex Parte Communications) and for Sanctions and Fees* is still under consideration and will be addressed by the assigned ALJs. With the exception of this motion, all outstanding motions that have not yet been ruled on are hereby denied.

11. Assignment of Proceeding

Michael Peevey is the assigned Commissioner and Mark S. Wetzell is the assigned ALJ in I.12-01-007. Michel Peter Florio is the assigned Commissioner and Amy C. Yip-Kikugawa is the assigned Administrative Law Judge in I.11-02-016 and I.11-11-009. The Presiding Officers in these proceedings are Administrative Law Judges Wetzell and Yip-Kikugawa.

Findings of Fact

1. In response to the September 9, 2010 explosion and fire in San Bruno, the Commission opened three separate investigations. Investigation (I.) 11-02-016 (Recordkeeping), I.11-11-009 (Class Location) and I.12-01-007 (San Bruno).
2. Decisions on violations were issued in each of the investigations.
3. The decisions on violations serve as the basis for determining penalties to be imposed.
4. The *San Bruno Violations Decision* found PG&E had committed 32 violations, many of them continuing for years, and a total of 59,255 separate offenses.

5. The *Recordkeeping Violations Decision* found PG&E had committed 33 violations, many of them continuing for years, and a total of 350,189 separate offenses.

6. The *Class Location Violations Decision* found PG&E had committed 3,643 violations, many of them continuing for years, and a total of 18,038,359 separate offenses.

7. There is no duplication of alleged violations regarding assumed SMYS values.

8. Adopted San Bruno violation 1 regarding hydrostatic testing is substantially similar to Felts Violation 3. Felts Violation 3 is more inclusive, as it addresses recordkeeping violations.

9. There is no duplication of alleged violations regarding establishing MAOP for Segment 180.

10. Adopted San Bruno violation 19, regarding clearance documentation, appears to be included in Felts Violation 5 and, therefore should be excluded from the total number of violations.

11. There is no duplication of alleged violations regarding the adequacy of SCADA.

12. There is no duplication of alleged violations regarding PG&E's emergency procedures.

13. There is no duplication of alleged violations regarding PG&E's GIS data.

14. There is no duplication of alleged violations regarding patrol records.

15. The Commission has been certificated pursuant to 49 U.S.C. § 60105 to enforce the Department of Transportation's minimum federal safety standards for gas pipeline facilities.

16. GO 112-E automatically incorporates all revisions to the Federal Pipeline Safety Regulations, 49 CFR Parts 190, 191, 192, 193 and 199.

17. The Commission's authority to impose fines for violations of laws and regulations are established by Pub Util. Code §§ 2107 and 2108.

18. Ordering Paragraph 3 of the *PSEP Decision* provides that all increases in revenue requirement ordered in that decision were subject to refund pending decisions in the Pipeline OIIs.

19. CPSD, TURN, DRA, CSB and CCSF propose penalties that consist of fines, disallowances and other remedies that would equal approximately \$2.25 billion after tax.

20. The penalties imposed on El Paso Natural Gas Company for the Carlsbad explosion was the result of a consent decree.

21. UGI Corporation settled the enforcement actions brought upon it for the Allentown explosion.

22. Decision 98-12-075 identified five factors to be considered in determining the level of penalties to be imposed.

23. The San Bruno explosion and fire resulted in physical harm

24. A violation of Rule 1.1 of the Commission's Rules of Practice and Procedure is a severe offense.

25. PG&E management had been notified at various times that its pipeline records were not complete and of the impact of not have these records.

26. The *Recordkeeping Violations Decision* had found that PG&E violated Rule 1.1 on two occasions with respect to its responses to CPSD's data requests and potentially violated Rule 1.1 in another data request.

27. PG&E's market value as of January 10, 2012 was \$16.439 billion, and an aggregate value of \$29.117 billion.

28. If one were to consider PG&E's gas transmission and distribution business on a standalone basis, it would have an aggregate value of approximately \$6.4 billion, and an equity value of approximately \$4.3 billion.

29. Between February 2012 and February 2013, various equity analysts projected fines, disallowances and other remedies range from \$500 million to \$3.65 billion (pre-tax).

30. PG&E shareholders have the financial resources to support a \$2.25 billion penalty.

31. With the exception of the investigation into the explosion of a distribution pipeline in Rancho Cordova, the Commission's past enforcement cases that resulted in large fines did not involve deaths or severe property damage.

32. The penalties under consideration are for violations found in three separate proceedings.

33. None of the Commission's prior enforcement cases or the other gas pipeline accidents identified in the *Wells Fargo Report* had an actual or potential impact on such a large area or number of people.

34. The \$38,000,000 penalty adopted in the *Rancho Cordova Decision* was the result of a modified settlement agreement.

35. The decision on violations in the Pipeline OIIs found that PG&E committed 3,708 violations, many of them continuing for years, for a total of 18,447,803 days in violation.

36. Based on the number of violations found, the range of fines that may be imposed pursuant to Pub. Util. Code § 2107 range from \$9.2 billion to \$254.3 billion.

37. The majority of the projects approved in the *PSEP Decision* were to correct recordkeeping shortfalls and implement safety improvements, including pipeline testing and replacement that had been neglected by PG&E.

38. The *PSEP Decision* disallowed rate recovery of \$635,000,000.

39. The San Bruno OII and the Recordkeeping OII sought participation from interested parties.

40. The Commission's Intervenor Compensation Program generally governs compensation of intervenors in Commission proceedings.

41. Under the Intervenor Compensation Program, only TURN would be eligible for compensation for its participation in these proceedings.

Conclusions of Law

1. Each violation of a regulation or statute is considered a separate offense, even if it is the result of the same underlying actions.

2. It is reasonable to eliminate duplicative and overlapping violations from the total number of days in violation used to calculate the penalties.

3. The Commission may enforce violations of 49 CFR 192 pursuant to its constitutional and statutory authority.

4. The Commission's authority to impose fines for violation of laws and regulations are established by Pub. Util. Code §§ 2107 and 2108.

5. The California Constitution, along with Pub. Util. Code § 701, confers broad authority on the Commission to regulate public utilities.

6. The Commission does not have discretion to direct how monies paid by a utility under Pub. Util. Code § 2107 are to be used.

7. Fines imposed pursuant to Pub. Util. Code § 2107 must be paid to the State's General Fund.

8. The purpose of fines is to deter further violations by the perpetrator and others.

9. PG&E's proposal that any fines or penalties be directed to invest in pipeline safety is both contrary to Pub. Util. Code § 2107 and would not serve to deter future violations.

10. The Commission has authority to fashion equitable remedies.

11. The Commission may impose disallowances pursuant to Pub. Util. Code §§ 451 and 701.

12. Any penalties imposed on PG&E in connection with the violations arising from the Pipeline OIIs should be significantly greater than those imposed on El Paso Natural Gas Company or UGI Corporation.

13. The California legislature has given the Commission broad discretion to determine the appropriate level of fines for violations, rather than establish a maximum fine amount.

14. Based on the violations presented in the Pipeline OIIs, CPSD's proposed penalty would not be considered excessive and may be necessary to deter future violations.

15. Violations that result in physical or economic harm and the failure to comply with statutes or Commission directions are considered severe violations.

16. The fact that PG&E's violations are pervasive throughout its pipeline system and result in violations of more than one regulation or law does not change the need to consider them as separate violations.

17. Misleading the Commission and impeding the staff's investigation in the Recordkeeping OII are severe offenses.

18. PG&E's offenses should be considered severe.

19. PG&E has the responsibility to ensure that its gas transmission pipeline systems are operated safely, not CPSD.

20. The fact that other gas utilities may also be violating statutes and regulations is not an excuse for PG&E to not be in compliance.

21. All utilities under the Commission's jurisdiction are expected to comply with Commission directives and orders.

22. PG&E has not acted in good faith to discover, disclose and remedy the violations.

23. The purpose of a penalty is to deter future violations by the company and others.

24. PG&E has the financial resources to support a \$2.25 billion penalty.

25. Based on the gravity and severity of the violations, PG&E's statutory obligation to provide safe and reliable gas service, the pervasive nature of PG&E's recordkeeping shortfalls, the impact of the San Bruno explosion on its residents, and the commission's and the public interest in ensuring safe and reliable natural gas service, a severe penalty is warranted.

26. Based on the significantly greater physical impact of the San Bruno explosion and fire, the increased risk to all residents in PG&E's service territory and the duration of the violations, the potential penalty exposure to PG&E should be significantly higher than the \$97,000,000 calculated in *Rancho Cordova*.

27. Many of the unrecoverable gas transmission costs identified by PG&E are outside the scope of this proceeding or speculative and should not be given any weight.

28. Although PG&E had been authorized to collect in rates costs to replace pipeline segments as part of its Gas Pipeline and Replacement Program in 1986

and 1992, PG&E moved to performing risk assessments in the late 1990's and only replaced 25 miles of pipe between 2000 and 2010.

29. PG&E should be ordered to refund \$400,000,000 of costs associated with its Pipeline Modernization Program to ratepayers.

30. The additional \$400,000,000 disallowance is an equitable remedy for PG&E's failure to replace pipeline as needed to ensure the safe operation of its gas transmission pipeline system.

31. PG&E should file a Tier 3 Advice Letter within 45 days after the effective date of this decision to adjust its revenue requirement to reflect the \$400,000,000 refund ordered in this decision.

32. There should be no adjustment to the disallowance adopted in this decision to account for any tax benefits PG&E may receive.

33. A fine of \$950,000,000 should be imposed under Pub. Util. Code §§ 2107 and 2108.

34. PG&E should be ordered to pay a fine of \$950,000,000.

35. The remedies contained in Appendix E of this decision should be adopted.

36. CSB's proposal that PG&E be directed to provide a \$100,000,000 endowment to fund a "California Pipeline Safety Trust" should be rejected.

37. CSB's and DRA's proposal that PG&E shareholders pay for an independent monitor to evaluate and review PG&E's compliance with the *PSEP Decision* and any fines or remedies ordered in this decision should be rejected.

38. The Commission's safety jurisdictions cannot be delegated, and an independent monitor established to augment CPSD's role is no substitute for, and does not obviate the need for, a properly resourced, trained, and tasked CPSD.

39. PG&E shareholders should reimburse CPSD up to \$30,000,000 for the costs to ensure compliance with the *PSEP Decision* and all remedies ordered in this decision, including CPSD's costs for hiring qualified independent auditors to audit and issue reports for both PG&E's MAOP Validation results and Project Mariner systems.

40. CPSD should present a proposal to the Commissioners within 60 days of the effective date of this decision to perform the MAOP Validation and Project Mariner audits, and the timing for such audits to occur.

41. CSB's proposal that PG&E pay \$150,000,000 to be placed in trust for a newly established Peninsula Emergency Response Fund should be rejected.

42. CSB's proposal V.D.2.b, regarding training of Gas Service Representatives and Gas Control Operators for responding to emergencies, as modified by PG&E, should be adopted.

43. PG&E should formalize its emergency response and disclosure obligations to cities, counties and fire districts.

44. PG&E should enter into mutual assistance agreements with the individual cities, counties or fire districts by no later than December 2015. These mutual assistance agreements shall be maintained in the appropriate Division Emergency Plan.

45. Responsibility for enforcing the mutual assistance agreements lies with the Commission, not the individual cities, counties or fire districts.

46. CSB's proposed remedy for automated shutoff valves with automatic capability should be rejected.

47. CSB's proposal that PG&E revise its Long-Term Incentive Plan and its Short-Term Incentive Plan should be rejected.

48. CPSD should present a proposal to the Commission within 60 days of the effective date of this decision for a comprehensive audit of all aspects of PG&E's operations, including control room operations, emergency planning, record-keeping, performance-based risk and integrity management programs and public awareness programs, as recommended by the NTSB.

49. Given the nature of these proceedings, it would not be equitable for utility ratepayers to pay for intervenors' litigation costs, nor to limit compensation to a single intervenor, in these proceedings.

50. Ensuring the provision of safe utility services is cognate and germane to the regulation of public utilities.

51. DRA's proposal that PG&E shareholder compensate TURN, CSB, CCSF and DRA for their litigation costs should be adopted.

52. PG&E shareholders should compensate TURN, CSB, CCSF and DRA for their reasonably-incurred litigation expenses, including the expert witness fees, in connection with these three proceedings. This will include expenses incurred from the initiation of the proceedings through the effective date of this decision.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company (PG&E) must pay a fine of \$950,000,000 by check or money order payable to the California Public Utilities Commission and mailed or delivered to the Commission's Fiscal Office at 505 Van Ness Avenue, Room 3000, San Francisco, CA 94102, within 40 days of the effective date of this order. PG&E shall write on the face of the check or money order "For deposit to the General Fund per Decision 14-____-____."

2. All money received by the Commission's Fiscal Office pursuant to the preceding Ordering Paragraph shall be deposited or transferred to the State of California General Fund as soon as practical.

3. Pacific Gas and Electric Company shall reduce its natural gas system regulated revenue requirement and refund to ratepayers \$400,000,000 from the amounts authorized in Decision 12-12-030.

4. Pacific Gas and Electric Company shall submit a Tier 3 Advice Letter to revise its Preliminary Statement, Part B, to reflect the change to its "Implementation Plan Rate" rate component to reflect the decrease in revenue requirement adopted in Ordering Paragraph 3 within 45 days of the effective date of this decision.

5. Pacific Gas and Electric Company shall implement the remedies adopted in Appendix E of this decision.

6. Within 60 days of the effective date of this decision, Pacific Gas and Electric Company shall file a Compliance Filing in these dockets, which:

- a. Identifies the remedies ordered in this decision that have already been ordered elsewhere, where that remedy (decision, report, etc.) was ordered, and PG&E's progress to date in complying with that remedy.
- b. Identifies any remedy ordered in this decision that modifies or eliminates any remedies ordered elsewhere.

7. The Compliance Filing ordered in Ordering Paragraph 6 shall also include a timeframe for completion of each of the remedies adopted in Appendix E of this decision.

8. Within 60 days of the effective date of this decision, the Safety and Enforcement Division shall present a proposal to the Commissioners for the MAOP Validation and Project Mariner audits, and the timing for such audits to

occur.

9. Within 60 days of the effective date of this decision, the Safety and Enforcement Division shall present a proposal to the Commissioners to perform the comprehensive audit recommended by the National Transportation and Safety Board, and the timing for such audit to occur. This audit will include all aspects of PG&E's operations, including control room operations, emergency planning, record-keeping, performance-based risk and integrity management programs and public awareness programs.

10. Pacific Gas and Electric Company's shareholders shall pay all reasonably-incurred litigation expenses, including the expert witness fees, in connection with these three proceedings for the City of San Bruno, the Office of Ratepayer Advocates, The Utility Reform Network and the City and County of San Francisco. This would include expenses incurred from the initiation of the proceedings through the effective date of this decision.

11. Investigation (I.) 12-01-007, I.11-02-016 and I.11-11-009 remain open to consider the City of San Bruno's *Motion of the City of San Bruno for An Order to Show Cause Why Pacific Gas and Electric Company Should not be Held in Violation of Commission Rule of Practice and Procedures 8.3(b) (Rule Against Ex Parte Communications) and for Sanctions and Fees.*

This order is effective today.

Dated _____, at San Francisco, California.

Appendix A

List of Appearances

Appearances

I.12-01-007

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Appearances I.12-01-007

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Appearances

I.12-01-007

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(End of I.11-11-009)

(END OF APPENDIX A)

Appendix B

Table of Violations and Offenses

Table of Violations and Offenses
San Bruno Investigation OII 12-01-007

Adopted No.	Alleged No.	Violation (abbreviated description; see applicable conclusion of law for full statement of violation)	Date (one-time violations)	Date Range		Offenses (Pub. Util Code § 2108)		
				(Continuing Violations)		Pre-1994	1994 & forward	Total
				Pre-1994	1994 & forward			
1	4	Section 451 – Violation of ASME B31.1.8-1955 (§811.412(c)) by not conducting a hydrostatic test	-	12/31/56 - 12/31/93	1/1/94- 9/9/10	13,515	6,096	19,611
2	5	Section 451 – Violation of ASME B31.1.8-1955 (§811.27(A)) by failing to visually inspect segments	1956	-	-	1	0	1
3	6	Section 451 – Violation of API 5LX (§VI) by installing pups less than five feet	1956	-	-	1	0	1
4	8	Section 451 – Violation of ASME B31.1.8-1955 (§811.27(G)) by assigning a yield strength above 24,000 psi	1956	-	-	1	0	1
5	11	Section 451 – Violation of ASME B31.1.8-1955 (§811.27(C)) by using incomplete welds and failing to measure wall thickness	1956	-	-	1	0	1
6	10	Section 451 – Violation of Section 1.7 of API Standard 1104 (4th Ed 1956) by using defective welds	1956	-	-	1	0	1
7	12, 13	Section 451 – Violation of ASME B31.1.8-1955 (§845.22) by failing to meet MAOP requirements	1956	-	-	1	0	1
8	1, 2, 3	Section 451 – Violation of industry standards and specifications, including ASME B31.1.8-1955 (§810.1) by installing pipe unsafe for operational conditions	-	12/31/56 - 12/31/93	1/1/94- 9/9/10	13,515	6,096	19,611
9	27	49 CFR 192.917(b) - Failure to use conservative assumptions	-	-	12/17/04 -9/9/10	0	2,093	2,093
10	15	49 CFR 192.917(b) - Failure to gather and integrate GIS data	-	-	12/17/04 -9/9/10	0	2,093	2,093
11	17	49 CFR 192.917(a) - Failure to analyze weld defects	-	-	12/17/04 -9/9/10	0	2,093	2,093
12	21	49 CFR 192.917(e)(2) - Failure to consider cyclic fatigue	-	-	12/17/04 -9/9/10	0	2,093	2,093
13	18	49 CFR 192.917(e)(3) - Failure to determine risk of DSAW threat	-	-	12/17/04 -9/9/10	0	2,093	2,093
14	19, 20	49 CFR 192.917(e)(3) - Failure to identify threats as unstable after pressure increase	-	-	12/17/04 -9/9/10	0	2,093	2,093
15	22	49 CFR 192.921(a) - Failure to use an appropriate assessment method	-	-	12/17/04 -9/9/10	0	2,093	2,093

16	26	49 CFR 192.917(c) - Use of improper risk ranking algorithm	-	-	12/17/04 -9/9/10	0	2,093	2,093
17	28	Section 451 - Creation of unsafe condition by avoiding hydrostatic testing or ILLI	-	-	12/17/04 -9/9/10	0	2,093	2,093
18	29	49 CFR 192.13(c) - Failure to follow internal work procedures	9/9/2010	-	-	0	1	1
19	30	Section 451 - Failure to follow internal work procedures	9/9/2010	-	-	0	1	1
20	31	49 CFR 192.605(c) - Failing to have adequate written procedures	9/9/2010	-	-	0	1	1
21	32	Section 451 - Unsafe conditions at Milpitas Terminal	-	-	2/28/10- 9/9/10	0	194	194
22	38	49 CFR 192.615(a)(3) - Failure to respond promptly and effectively	9/9/2010	-	-	0	1	1
23	39	49 CFR 192.615(a)(1) - Failure to receive, identify, and classify notices	9/9/2010	-	-	0	1	1
24	40	49 CFR 192.615(a)(4) - Failure to provide resources at scene	9/9/2010	-	-	0	1	1
25	41	49 CFR 192.615(a)(6) - Failure to adequately perform emergency shutdown	9/9/2010	-	-	0	1	1
26	42	49 CFR 192.615(a)(7) - Failure to make hazards safe	9/9/2010	-	-	0	1	1
27	43	49 CFR 192.615(a)(8) - Failure to notify first responders	9/9/2010	-	-	0	1	1
28	44	49 CFR 192.605(c)(1) and (3) - Failure to have adequate emergency manual	9/9/2010	-	-	0	1	1
29	45	49 CFR 192.615(a)(2) - Failure to follow adequate procedures for communication with first responders	9/9/2010	-	-	0	1	1
30	53	49 CFR199.225(a) - Failure to perform alcohol tests	9/9/2010	-	-	0	1	1
31	34	Section 451 - Unsafe condition caused by emergency response deficiencies	9/9/2010	-	-	0	1	1
32	55	Section 451 - Unsafe condition due to budget cutting	-	-	1/1/08- 9/9/10	0	983	983
					Total Offenses	27,036	32,219	59,255

(End of Appendix B)

APPENDIX C

Table of Violations for I.11-02-016 (Recordkeeping OII)

Appendix C

Table of Violations for I.11-02-016 (Recordkeeping Oil)

	Violation (abbreviated description; see applicable conclusion of law for full statement of violation)	Duration	Pre-1/01/1994 Days in Violation	Post-1/01/1994 Days in Violation	Total Days in Violation
1	No records for salvaged pipe installed into Segment 180 - Violation of Public Utilities Code Section 451 (Felts Violation 1)	1956- September 9, 2010	13,698	6,095	19,793
2	Failure to create/retain construction records for 1956 project GM 136471 - Violation of Public Utilities Code Section 451 (Felts Violation 2)	1956- September 9, 2010	13,698	6,095	19,793
3	Failure to create/retain post-installation pressure test records for Segment 180 - Violation of Public Utilities Code Section 451 and ASME B.31.8 Section 841 (Felts Violation 3)	1956- September 9, 2010	13,698	6,095	19,793
4	Increase MAOP of Line 132 without conducting hydrostatic test - Violation of Public Utilities Code Section 451 (Felts Violation 4)	December 10, 2003 - September 9, 2010		2,465	2,465
5	Failure to Follow Procedures to Create Clearance Record - Violation of Public Utilities Code Section 451 (Felts Violation 5)	August 27, 2010 - September 9, 2010		13	13
6	Out of date drawings and computer diagrams of Milpitas Terminal - Violation of Public Utilities Code Section 451 (Felts Violation 7)	December 2, 2009 - July 2011		590	590
7	Failure to have accurate SCADA diagrams - Violation of Public Utilities Code Section 451 (Felts Violations 7 and 9)	December 2, 2009 - October 27, 2010		329	329
8	No Back-up Software at the Milpitas Terminal - Violation of Public Utilities Code Section 451 (Felts Violations 8)	September 9, 2010		1	1
9	Operated Line 132 in excess of 390 MAOP - Violation of Public Utilities Code Section 451 (Felts Violation 11)	December 11, 2003 - September 9, 2010		2,464	2,464
10	Operated Line 132 in excess of 390 MAOP - Violation of Public Utilities Code Section 451 (Felts Violation 11)	December 9, 2008 - September 9, 2010		639	639

Appendix C

Table of Violations for I.11-02-016 (Recordkeeping OII)

	Violation (abbreviated description; see applicable conclusion of law for full statement of violation)	Duration	Pre-1/01/1994 Days in Violation	Post-1/01/1994 Days in Violation	Total Days in Violation
11	Operated Line 132 in excess of 390 MAOP - Violation of Public Utilities Code Section 451 (Felts Violation 11)	September 9, 2010		1	1
12	PG&E's Contradictory Data Responses Regarding Recorded Brentwood Camera 6 Video - Violation of Commission Rules of Practice and Procedure Rule 1.1 (Felts Violation 13)	October 10, 2011 - March 9, 2012		151	151
13	PG&E's Data Response 30, Q 8.d Did Not Identify All of the People in Milpitas Handling the Pressure Problem on September 9, 2010 - Violation of Commission Rules of Practice and Procedure Rule 1.1 (Felts Violation 14)	December 17, 2011 - January 15, 2012		29	29
14	PG&E's Data Response 30, Q 2 Did Not Identify All of the People in Milpitas Handling the Pressure Problem on September 9, 2010 - Violation of Commission Rules of Practice and Procedure Rule 1.1 (Felts Violation 14)	December 17, 2011 - January 15, 2012		29	29
15	PG&E's recordkeeping practices for Job Files adversely impacts ability to operate transmission pipeline system safely - Violation of Public Utilities Code Section 451. (Felts Violation 16)	1987 - December 12, 2012	2,376	6,928	9,304
16	PG&E failed to retain pressure test records for all segments of its gas transmission pipeline system - Violation of Public Utilities Code Section 451, ASME B.31.8, GO 112 through 112-B and PG&E's internal records retention policies (Felts Violation 18)	1956 - December 20, 2012	13,698	6,928	20,626
17	Weld Inspection Records Missing or Incomplete - Violation of Public Utilities Code Section 451, 49 CFR 192.241 and 192.243, ASME B.31.8, General Orders 112, 112-A, 112-B, section 107. (Felts Violation 19)	1955 - December 20, 2012	14,064	6,928	20,992

Appendix C

Table of Violations for I.11-02-016 (Recordkeeping Oil)

	Violation (abbreviated description; see applicable conclusion of law for full statement of violation)	Duration	Pre-1/01/1994 Days in Violation	Post-1/01/1994 Days in Violation	Total Days in Violation
18	Operating Pressure Records Missing, Incomplete or Inaccessible - Violation of Public Utilities Code Section 451 (Felts Violation 20)	1955 - December 17, 2004	14,064	4,003	18,067
19	Inaccurate and incomplete data in leak reports; missing leak records - Violation of Public Utilities Code Section 451 (Felts Violations 21 and 22)	1955 - December 20, 2012	14,064	6,928	20,992
20	Failure to retain records of reconditioned and reused pipe in transmission pipeline system - Violation of Public Utilities Code Section 451 (Felts Violation 23)	1940 - December 20, 2012	19,542	6,928	26,470
21	Failure to ensure the accuracy of data in GIS and to adopt conservative assumed values for missing data in GIS - Violation of Public Utilities Code Section 451 (Felts Violation 24)	1995 - December 20, 2012		6,382	6,382
22	PG&E unable to assess the integrity of its pipeline system and effectively manage risk - Violation of Public Utilities Code Section 451 (Felts Violation 25)	December 17, 2004 - December 20, 2012		2,925	2,925
23	Failure to retain metallurgist report concerning a 1963 fire and explosion on Line 109 - Violation of Public Utilities Code Section 451 (Felts Violation 27)	1963 - December 20, 2012	11,142	6,928	18,070
24	Inability to operate and maintain PG&E's gas transmission pipeline system in a safe manner due to poor records management activities - Violation of Public Utilities Code Section 451, GO 112 through 112-B, Section 107, ASME B.31.8. (Duller/North Violation A.1)	1955 - December 20, 2012	14,064	6,928	20,992
25	Failure to retain records of Leak Survey Maps - Violation of ASME B.31.8 Section 851.5. (Duller/North Violation B.1)	April 16 2010 - December 20, 2012		979	979

Appendix C

Table of Violations for I.11-02-016 (Recordkeeping Oil)

	Violation (abbreviated description; see applicable conclusion of law for full statement of violation)	Duration	Pre-1/01/1994 Days in Violation	Post-1/01/1994 Days in Violation	Total Days in Violation
26	Failure to retain records of Line Patrol Reports - Violation of ASME B.31.8 Section 851.5. (Duller/North Violation B.2)	September 1, 1964 - December 20, 2012	10,714	6,928	17,642
27	Failure to retain records of Line Inspection Reports - Violation of ASME B.31.8 Section 851.5. (Duller/North Violation B.3)	December 17, 1991 - December 20, 2012	746	6,928	7,674
28	Failure to retain pressure test records - Violation of ASME B.31.8 Section 851.417. (Duller/North Violation B.4)	September 1, 1964 - December 20, 2012	10,714	6,928	17,642
29	Failure to retain records of transmission line inspections - Violation of ASME B.31.8 Section 851.5. (Duller/North Violation B.5)	September 1, 1964 - December 20, 2012	10,714	6,928	17,642
30	Failure to comply with internal records retention policies - Violation of 49 C.F.R. 192.13(c). (Duller/North Violation B.6)	1955 - December 20, 2012	14,064	6,928	20,992
31	Failure to identify and include in all pipe segments with unusual longitudinal seams and joints for replacement - Violation of Public Utilities Code Section 451. (Duller/North Violation C.1)	June 1988 - December 20, 2012	2,026	6,928	8,954
32	Failure to properly identify and replacing those pipelines that were prone to damage during severe earthquake - Violation of Public Utilities Code Section 451. (Duller/North Violation C.2)	June 1992 - December 20, 2012	565	6,928	7,493
33	Failure to maintain comprehensive database for all gas leaks in transmission pipeline system - Violation of Public Utilities Code Section 451. (Duller/North Violation C.3)	1957 - December 20, 2012	13,333	6,928	20,261
Total Days in Violation			206,984	143,205	350,189

(END OF APPENDIX C)

APPENDIX D

Table of Violations for I.11-11-009 (Class Location OII)

Appendix D

Table of Violations for I.11-11-009 (Class Location OII)

Violation (abbreviated description; see applicable conclusion of law for full statement of violation)	Number of Segments (Violations)	Pre-1/01/1994 Days in Violation	Post-1/01/1994 Days in Violation*	Total Days in Violation
49 C.F.R. § 192.107 (b) (Assumed SMYS Values)	133	451,890	766,482	1,218,372
P.U. Code § 451 (Assumed SMYS Values Resulting in Excessive MAOPs)	133	451,890	766,482	1,218,372
49 C.F.R. § 192.13(c) (Not Following Procedures)	843	2,107,255	4,162,027	6,269,282
49 C.F.R. § 192.609 (Required Study)	224	542,030	1,095,373	1,637,403
49 C.F.R. § 192.611 (MAOP Confirmation/Revision)	224	542,030	1,095,373	1,637,403
49 C.F.R. § 192.613 (Continuing Surveillance)	677	1,723,956	3,346,447	5,070,403
49 C.F.R. § 192.619 (Non-Commensurate SMYS)	63	154,734	338,828	493,562
P.U. Code § 451 (Non-Commensurate SMYS)	63	154,734	338,828	493,562
TOTAL	3,643	6,128,519	11,909,840	18,038,359

*End Date January 17, 2012

(END OF APPENDIX D)

APPENDIX E

Adopted Remedies

Appendix E

Adopted Remedies

Adopted Remedies Proposed by CPSD in All Three Oils

1 PG&E shareholders shall pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD, for the cost of verification audits and inspections to ensure compliance with the other remedies. PG&E shall also pay to reimburse CPSD for contracts retaining independent industry experts, chosen by CPSD in the near term to provide needed technical expertise as PG&E proceeds with its hydrostatic testing program, in order to provide a high level of technical oversight and to assure the opportunity for legacy piping characterization through sampling is not lost in the rush to execute the program.

2 PG&E shareholders shall pay to reimburse CPUC/CPSD for the cost of conducting all three of the present investigations.

Adopted Remedies Proposed by CPSD in I.12-01-007 (San Bruno Oil)

1 PG&E's pipeline construction standards shall meet or exceed all legal requirements and industry standards for identifying and correcting pipe deficiencies and strength testing.

2 PG&E shall revise its integrity management procedures to robustly meet the data gathering requirements of 49 CFR Part 192.917(b) and ASME-B31.8S, and to do so without limiting its data-gathering to only that data which is "readily available, verifiable, or easily obtained" by PG&E.

3 PG&E shall perform a complete company-wide record search to populate its GIS database with all identified gas transmission pipeline leak history, including closed leak, information not already transferred to the GIS.

4 PG&E shall revise its Integrity Management training to ensure that missing data is represented by conservative assumptions, and that those assumptions are supportable, per the requirements of ASME B31.8S. As required by Ordering Paragraph 1 of D.11-06-017, PG&E shall fully document any engineering-based assumption it makes for data that is missing, incomplete or unreliable. Such assumptions must be clearly identified and justified and, where

ambiguities arise, the assumption allowing the greatest safety margin must be adopted.

5 PG&E shall revise its integrity management procedures and related training, to ensure robust data verification processes are enacted and implemented.

6 PG&E shall revise its threat identification and assessment procedures and training, including its Baseline Assessment Plans, to fully incorporate all relevant data for both covered and non-covered segments, including but not limited to potential manufacturing and construction threats, and leak data.

7 PG&E shall re-label its system MAOP nomenclature in accordance with 49 CFR Part 192.

8 PG&E shall permanently cease the self-suspended practice of regularly increasing pipeline pressure up to a "system MAOP" to eliminate the need to consider manufacturing and construction threats. In addition, PG&E shall analyze all segments that were subjected to the planned pressure increases to determine the risk of failure from manufacturing threats under 49 CFR Part 192.917(e)(3), and perform further integrity assessments as warranted. Each assessment shall be documented and retained for the life of the facility.

9 PG&E shall revise its threat identification and assessment procedures and training to ensure that HCA pipeline segments are prioritized for a suitable assessment method (e.g., hydro-testing), per the requirements of 49 CFR Part 192.917(e)(3)-(4).

10 PG&E shall revise its threat identification and assessment procedures and training to ensure that cyclic fatigue and other loading conditions are incorporated into their segment specific threat assessments and risk ranking algorithm, and that threats that can be exacerbated by cyclic fatigue are assumed to exist per the requirements of 49 CFR Part 192.917(b).

11 PG&E shall revise its risk ranking algorithm to ensure that PG&E's weighting factors in its risk ranking algorithm more accurately reflect PG&E's actual operating experience along with generally reflected industry experience.

12 PG&E shall revise its threat identification and assessment procedures and training to ensure that PG&E's weighing of factors in its risk ranking algorithm and the input of data into that algorithm corrects the various systemic issues identified in the NTSB report and the CPSD/PHMSA 2011 Risk Assessment Audit.

13 PG&E shall revise its threat identification and assessment procedures and training to ensure that the proper assessment method is being used to address a pipeline's actual and potential threats.

14 PG&E shall review and implement its Inspection, Testing, and Maintenance procedure applicable to stations to ensure that integrity of electrical equipment, wiring and documentation and identification of electrical components does not deteriorate to unsafe conditions.

15 PG&E shall revise its SCADA system to reduce the occurrence of "glitches" and anomalies in the control system that desensitizes operators to the presence of alarms and other inconsistent information.

16 PG&E shall reevaluate SCADA alarm criteria with the goal of reducing unnecessary alarm messages.

17 PG&E shall revise its control systems, including SCADA, to ensure that all relevant information, including redundant pressure sensors, is considered.

18 PG&E shall install more pressure sensors and have them closely spaced and use the additional information to incorporate leak or rupture recognition algorithms in its SCADA system.

19 PG&E shall program its PLCs to recognize that negative pressure values are erroneous and require intervention to prevent valves from fully opening.

20 PG&E shall replace the three pressure controllers which malfunctioned on September 9, 2010 unless PG&E demonstrates to CPSD's satisfaction that the controllers have been removed from the system.

21 PG&E shall review its work clearance process to ensure that abnormal operating conditions that may arise during the course of work are anticipated and responses to those conditions are detailed. Additionally, PG&E shall create a procedure covering the commission of electrical equipment from one Uninterruptable Power Supply to another. Each project Clearance shall include possible scenarios and contingency plans to mitigate any abnormal operating conditions that may arise.

22 PG&E shall revisit its Work Clearance procedures and training to ensure that future work will not be authorized unless all forms and fields therein are comprehensively and accurately populated, and reviewed by a designated clearance supervisor. Additionally, work shall not commence until such time as the operator and technician have reviewed the work clearance and have

confirmed that both understand the actions to take in the event an abnormal condition is encountered. Lastly, PG&E must ensure that proper records showing the specific steps taken, when taken, and by whom, are maintained pursuant to its Record Retention Schedule.

23 PG&E shall provide training to Gas Service Representatives (GSRs) to identify hazards associated with PG&E natural gas infrastructure and take action to make the condition safe for the public and employees. If assistance is needed and the situation is an imminent hazard, the GSR will remain on site until appropriate resources take control. The training provided GSRs should enable them to recognize the differences between fires of low-pressure natural gas, high-pressure natural gas, gasoline fuel, or jet fuel.

24 Internal coordination – PG&E shall revise its procedures to outline each individual Dispatch and Control Room employee’s roles, responsibility, and lines of communication required to be made in the event of an emergency either during or outside normal working hours. This shall include assigning specific geographical monitoring responsibilities for Control Room employees.

25 External coordination – Until PHMSA issues guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of control room operators immediately and directly notifying the 911 emergency call center(s) for the communities and jurisdiction in which those pipelines are located when a possible rupture of any pipeline is indicated, PG&E shall revise its own procedures to allow for the immediate and direct notification of 911 emergency call centers when a possible pipeline rupture is indicated.

26 Decision making authority – PG&E shall revise its emergency procedures to clarify emergency response responsibilities, especially in regards to authorizing valve shut offs. PG&E policies shall not just delegate authority to act but also detail obligations to act.

27 RCV/ASV – PG&E shall perform a study to provide Gas Control with a means of determining and isolating the location of a rupture remotely by installing RCVs, ASVs, and appropriately spaced pressure and flow transmitters on critical transmission line infrastructure and implement the results.

28 Response time – PG&E shall review required response times in other utility service territories nationwide and devise appropriate response time requirements to ensure that its Emergency Plan results in a “prompt and effective” response to emergencies. PG&E will provide its analysis and conclusions to CPSD.

29 Emergency Plan Revision – Currently a maintenance supervisor annually reviews SCADA alarm responses and makes revisions as necessary. This process shall be formalized to ensure a robust feedback loop such that new information is fully analyzed and necessary changes to PG&E’s Emergency Plan and/or other procedures are implemented with a subsequent review of made changes to ensure they are adequate.

30 Public Awareness – Until PHMSA issues guidance to operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines regarding the importance of sharing system-specific information, including pipe diameter, operating pressure, product transported, and potential impact radius, about their pipeline systems with the emergency response agencies of the communities and jurisdiction in which those pipelines are located, PG&E shall undertake a review of its gas transmission public awareness and outreach programs to ensure that system-specific information is appropriately disseminated.

31 PG&E’s business strategies and associated programs shall expressly ensure that safety is a higher priority than shareholder returns and be designed to implement that priority.

32 Deleted.

33 PG&E’s gas employee incentive plan shall include safety. PG&E shall revise its STIP program to make safety performance 40% of the score used to determine the total award. PG&E shall require all gas leaders including officers to participate in annual training activities that enhance and expand their knowledge of safety, including exercises in which gas leaders including officers will have an opportunity to enhance their knowledge of incident command and will participate in an annual safety leadership workshop.

34 Deleted.

35 PG&E shall focus on enhancing public safety and operational excellence as a core mission, and shall examine whether the time and money it spends on public relations and political campaigns distracts it from this core mission.

36 Deleted.

37 PG&E shall examine internal communication processes to ensure that all employees understand their job responsibilities and priorities. Goals of PG&E gas employees shall describe what is expected of them and their teams.

38 PG&E shall follow and implement the following NTSB recommendations:

- 38.a Revise work clearance procedures to include requirements for identifying the likelihood and consequence of failure associated with the planned work and for developing contingency plans. (P-11-24)
- 38.b.1 Establish a comprehensive emergency response procedure for responding to large- scale emergencies on transmission lines; the procedure shall (1) identify a single person to assume command and designate specific duties for supervisory NTSB Pipeline Accident Report 131 control and data acquisition staff and all other potentially involved company employees.
- 38.b.2 Establish a comprehensive emergency response procedure for responding to large- scale emergencies on transmission lines; the procedure shall include the development and use of trouble-shooting protocols and checklists.
- 38.b.3 Establish a comprehensive emergency response procedure for responding to large- scale emergencies on transmission lines; the procedure shall include a requirement for periodic tests and/or drills to demonstrate the procedure can be effectively implemented. (P-11-25).
- 38.c Equip supervisory control and data acquisition system with tools to assist in recognizing and pinpointing the location of leaks, including line breaks; such tools could include a real-time leak detection system and appropriately spaced flow and pressure transmitters along covered transmission lines. (P-11-26).
- 38.d Expedite the installation of automatic shutoff valves and remote control valves on transmission lines in high consequence areas and in class 3 and 4 locations, and space them at intervals that consider the factors listed in Title 49 Code of Federal Regulations Part 192.935(c). (P-11-27).
- 38.e Revise post-accident toxicological testing program to

ensure that testing is timely and complete. (P-11-28).

- 38.f Assess every aspect of the integrity management program, paying particular attention to the areas identified in this investigation, and implement a revised program that includes, at a minimum, (1) a revised risk model to reflect PG&E Company's actual recent experience data on leaks, failures, and incidents; (2) consideration of all defect and leak data for the life of each pipeline, including its construction, in risk analysis for similar or related segments to ensure that all applicable threats are adequately addressed; (3) a revised risk analysis methodology to ensure that assessment methods are selected for each pipeline segment that address all applicable integrity threats, with particular emphasis on design/material and construction threats; and (4) an improved self-assessment that adequately measures whether the program is effectively assessing and evaluating the integrity of each covered pipeline segment. (P-11-29).
- 38.g Conduct threat assessments using the revised risk analysis methodology incorporated in your integrity management program, as recommended in Safety Recommendation P-11-29, and report the results of those assessments to the Commission and the Pipeline and Hazardous Materials Safety Administration. (P-11-30).
- 38.h Develop, and incorporate into PG&E's public awareness program, written performance measurements and guidelines for evaluating the plan and for continuous program improvement. (P-11-31).

Adopted Remedies Proposed by CPSD in I.11-02-016 (Recordkeeping OII)

1 PG&E's gas transmission organization shall achieve at least a Level 3 information maturity score under the Generally Accepted Records Keeping Principles within 3 years.

2 Rejected

3 PG&E shall issue a corporate policy and standard that will:

- 3.a Communicate recordkeeping expectations that underlie its post-2010 Corporate Records and Information Management Policy and Standard for all departments and divisions across PG&E. These expectations shall be incorporated into procedures specific to meet the needs of every Line of Business.
- 3.b The Information Management and Compliance Department shall design a governance controls catalog for recordkeeping practices to assess compliance with the corporate policy and standard, consistency of behavior with official records being stored in approved systems of record, and timeliness of addressing records during their lifecycle.
- 3.c The retention schedule will support the policy by providing retention length for all identified official records to meet legal and regulatory mandates.

4 PG&E shall develop and implement an education and training program for the gas transmission organization in Records and Information Management principles and practices within an information governance framework. The education and training program shall include the following:

- 4.a All staff shall be receive training to understand the responsibilities and tasks that relate to managing records. These education and training programs shall be updated and offered at regular intervals, at least twice annually, to include amendments to the records management program and for the benefit of new staff.
- 4.b There shall be specific and additional training for those staff involved directly in the management of retention and disposal of records. These education and training programs shall be offered at least annually.
- 4.c There shall be specific and additional training focusing on all of the recordkeeping systems used within the Gas Operations Organization. Employees and PG&E contractors who have duties using these programs shall be required to attend these training sessions. These education and training programs shall be offered at least annually.

5 PG&E shall develop and deploy the systems necessary to manage, maintain, access and preserve records (physical and electronic, in all formats and media types); their related data, metadata, and geographic location and

geospatial content to the extent appropriate in accordance with legal and business mandated rules, utilizing technology that includes appropriate aids to help improve data and metadata quality.

6 PG&E shall establish accountability for development and implementation of a PG&E governance strategy across gas transmission that shall rest with PG&E Senior Management and a method of accountability shall be developed and implemented.

7 PG&E shall identify and document the employees responsible for implementing the Records and Information Management program for gas transmission.

8 PG&E shall develop consistent standard practices that include gas transmission records management linked to corporate policies on information governance.

9 PG&E shall implement mandated retention periods for all records relevant to gas transmission.

10 PG&E shall ensure that each gas transmission standard conforms with Records and Information Management (RIM) policies for gas transmission.

11 PG&E shall include the treatment of active and inactive records in its Records and Information Management (RIM) Policy for gas transmission.

12 PG&E's records management processes shall be managed and maintained in accordance with the traceable, verifiable and complete standard, including retention of physical and digital pipeline records for the "life of the asset."

13 The accuracy and completeness of data within gas transmission records shall be traceable, verifiable and complete and when errors are discovered, the record shall be corrected as soon as correct information is available and the reason(s) for each change shall be documented and kept with the record.

14 PG&E shall create a standard format for the organization of a job file so that PG&E personnel will know exactly where to look in a file folder, or set of file folders, to find each type of document associated with a job file. At a minimum, a job file will contain traceable, verifiable and complete records to support the MAOP of the pipeline segment installed; design documentation; purchase documentation showing the sources and specifications of equipment purchased; permits; environmental documents; field notes; design, construction

and as-built drawings; x-ray reports and weld maps; pressure test records; correspondence with the CPUC; and inspection reports and correspondence.

15 Job file data, including drawings, for all parts of the active PG&E gas transmission system shall be immediately accessible from multiple locations. The development of a complete and accurate catalog of job files that can be searched immediately shall be included within this objective.

16 The information that was contained in PG&E's historic records and documents, and that has been identified as 'missing or disposed of,' and is necessary to be retained for the safe operation of the pipelines, pursuant to laws, regulations and standards and the PG&E retention schedule, shall be recovered. This recovery shall include but not be limited to:

- a. updating and verification of data in engineering databases, such as the leak database, GIS and the integrity management model,
- b. updating plat sheets and other engineering drawings, and
- c. updating and organizing job files.

When PG&E cannot locate records, it may apply conservative assumptions consistent with the requirements of Ordering Paragraph 1 of D.11-06-017. PG&E shall be required to fully document any engineering-based assumptions it makes for data that has been identified as "missing or disposed of." Such assumptions must be clearly identified and justified and, where ambiguities arise, the assumption allowing the greatest safety margin must be adopted.

17 PG&E shall document adoption of, and changes and amendments to policies, standards and procedures within the Gas Operations Organization (or its successor division(s) with responsibility for design, construction, operations, maintenance, testing, safety and integrity management of PG&E's natural gas pipeline system). The documentation shall include the reasons for adoption, amendment or cancellation of the policies, standards and procedures. An audit trail of changes shall be maintained, retained for as long as the standard is in effect. If a policy, standard or procedure is cancelled, a copy of the policy, standard or procedure in effect at the time of cancellation, as well as the reason for its cancellation, shall be preserved permanently, taking heed of potential changes in technology that may render documents unreadable in the future.

18 PG&E will identify each section of pipe that has been salvaged and reused within the PG&E gas transmission system. For each section of pipe identified, PG&E will change the installed date in its GIS and its IM model to the date the pipe was originally installed in the PG&E pipeline system.

19 Rejected. TURN proposed remedy 1 adopted instead.

20 PG&E shall implement the recommendations included in the final Pricewaterhouse Coopers (PwC) audit report. (TURN Exhibit 16, Appendix B).

21 Using independent auditors, CPSD will undertake audits of PG&E's recordkeeping practices within the Gas Transmission Division on an annual basis for a minimum of ten years after the final decision is issued in I.11-02-016.

22 PG&E will correct deficiencies in recordkeeping discovered as a result of each CPSD audit and will report to CPSD when such deficiencies have been corrected.

Adopted Remedies Proposed by CPSD in I.11-11-009 (Class Location Oil)

1 Systems: PG&E shall utilize industry-standard software for electronic storage of class location information. PG&E shall devise a process to capture new PG&E service hook-ups especially in proximity to transmission lines and incorporate into the class location analysis.

2 Procedures: PG&E shall update procedures, patrolling process instructions, and related Operator Qualification training to require written confirmation to Patrol Supervisors that follow up has been performed on all new construction that the patroller has previously observed and documented.

3 Procedure 6.3 (3) shall be rewritten as "List all new observations regardless if it is believed that the ground crew has already investigated the observation."

4 TD-4412-07 section 6.1 (2) shall include specific language for the pilot to recommended increased patrolling to the Aerial Patrol Program Manager.

5 PG&E shall ensure that the Report of New Construction forms are completed.

6 The Aerial Patrol Program Manager's duties shall be increased to include oversight and review of the quality and accuracy of patrol reports.

7 PG&E shall create a detailed procedures manual containing the Aerial Patrol Program Manager's duties to ensure quality control of aerial patrol responsibilities.

8 Training: PG&E shall utilize varied training exams for patrolling.

9 The new training exams for patrolling shall include questions with greater detail and complexity than the current exam and shall use aerial photos

as exam exhibits where pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training materials and associated tests shall be reviewed and updated to enhance employee competency, utilize aerial photos and other aids, and reflect field conditions to approximate buildings' key distances from lines.

10 Improve Aerial Patrol Pilot training: PG&E's pilot training shall include aerial photographs taken at an altitude of 750 feet, which replicates what the pilots see on patrol, and include a number of structures both within and outside of the 660 foot standard. Use the photos as exam exhibits where the pilots indicate which structures are approximately 660 feet from the right of way and would require reporting. Training shall also include a Well-Defined Area (WDA) in the exhibit as well. PG&E shall also include in its training photographs, video or other aids to reflect expected views to be seen from typical patrol altitudes.

11 Audits the patrolling process shall include a comparison of new construction observations with new gas/electrical hook ups near the line to ensure that new construction has not been missed.

12 A new item "All Sections of Document Completed" shall be added to the audit checklist when reviewing Reports of New Construction.

13 Audits shall make sure that copies of completed Reports of New Construction are being provided to local supervisors, as required by standard procedure TD-4127P-01 section 3.8 (5).

Adopted Remedies Proposed by City of San Bruno

1 Recommendation V.B rejected.

2 PG&E shall reimburse CPSD for the costs of contracts to retain independent experts chosen by CPSD for verification audits and inspections to ensure compliance with the *PSEP Decision* and remedies ordered in this decision. This shall include CPSD's costs for hiring qualified independent auditors to audit and issue reports for both PG&E's MAOP Validation results and Project Mariner systems. If CPSD determines that it needs the services of outside consultants to develop additional capabilities to evaluate and assess the integrity of PG&E's pipeline system through the use of meaningful metrics, then the costs of such consultants will fall within the scope of this remedy. The reimbursement amount is capped at \$30 million.

3 Recommendation V.D.1 rejected

4 Recommendation V.D.2.a incorporated into CPSD adopted remedy 23 for I.12-01-007.

5 PG&E shall provide training to its Gas Service Representatives and Gas Control Operators to ensure that they coordinate effectively with emergency responders, follow PG&E's own internal procedures when responding to emergencies, and each GSR under Gas Control Operators' direction should be trained and able to manually shut off emergency shutdown zone valves. PG&E should also audit its GSRs and Gas Control Operators to ensure they are properly trained.

6 Recommendation V.D.2.c incorporated into CPSD adopted remedy 4 for I.11-02-016.

7 Recommendation V.D.2.d incorporated into CPSD adopted remedy 4 for I.11-02-016.

8 Recommendation V.D.2.e incorporated into CPSD adopted remedy 4 for I.11-02-016.

9 Recommendation V.D.2.f incorporated into CPSD adopted remedy 10 for I.11-11-009.

10 PG&E shall enter into Mutual Assistance Agreements with the cities, counties and fire districts within its service territory by no later than December 31, 2015. The Mutual Assistance Agreements shall formalize PG&E's emergency response role and disclosure obligations. A copy of each Mutual Assistance Agreement shall be maintained in the appropriate Division Emergency Plan.

11 Recommendation V.E rejected.

12 Recommendation V.F rejected.

Adopted Remedies Proposed by TURN

1 PG&E shall create a centralized database to track where it has placed re-used or otherwise reconditioned pipe in its system. For each such segment, the database should show the date of manufacture of the segment, if known. If this date is unknown, the database should so indicate, to ensure that the segment is given appropriate attention in integrity management. The database should include a link to reliable and readily accessible documentation showing, for each re-used or otherwise reconditioned pipe segment, that all steps necessary to prepare the segment for installation were performed and inspected. If such documentation is unavailable, the centralized documentation should so indicate so that the segment will be given appropriate attention in integrity management.

PG&E will maintain this database so long as there are sections of reused pipe in the PG&E operating gas transmission pipeline system.

2 Recommendation 2A incorporated into CPSD adopted remedy 4 for I.12-01-007.

3 Recommendation 2B incorporated into CSB adopted remedy 2.

4 Recommendation 3 incorporated into CSB adopted remedy 2.

Adopted Remedies Proposed by DRA

1 CPSD shall present a proposal to the Commission within 60 days of the effective date of this decision for a comprehensive audit of all aspects of PG&E's operations, including control room operations, emergency planning, record-keeping, performance-based risk and integrity management programs and public awareness programs, as recommended by the NTSB.

2 PG&E shareholders shall compensate TURN, CSB, CCSF and DRA for their reasonably-incurred litigation expenses, including the expert witness fees, in connection with these three proceedings. This will include expenses incurred from the initiation of the proceedings through the effective date of this decision.

(END OF APPENDIX E)