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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Investigation and Order to Show Cause 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 Distribution System Pipelines.

Investigation 14-11-008
(Filed November 20, 2014)

(See Attachment B for List of Appearances.)

**DECISION REGARDING INVESTIGATION OF PACIFIC GAS AND ELECTRIC
COMPANY'S GAS DISTRIBUTION FACILITIES RECORDS**

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DECISION REGARDING INVESTIGATION OF PACIFIC GAS AND ELECTRIC COMPANY'S GAS DISTRIBUTION FACILITIES RECORDS

Summary

Today's decision finds that Pacific Gas and Electric Company failed to comply with applicable law and regulations in maintaining accurate records of its natural gas distribution system. These inaccurate records were relied on for locating and marking underground facilities in anticipation of excavation. The inaccurately mapped and consequently inaccurately marked facilities led to excavators damaging the distribution system in several instances. Release of natural gas, service interruptions and, in one case, significant property damage resulted. Today's decision first separates the violations into systemic failures and isolated mistakes in an otherwise compliant system, and imposes substantial fines for systemic failures and graduated fines for the isolated instances. Total fines of \$25,626,000 are assessed for the systemic violations and incidents found in today's decision. With the Citation previously assessed for the Carmel incident, the total fine imposed on Pacific Gas and Electric Company for distribution system incidents is \$36,476,000. This proceeding is closed.

1. Background

On November 20, 2014, the Commission opened this Investigation and issued an Order to Show Cause in response to six incidents that called into question the safety of Pacific Gas and Electric Company's (PG&E) natural gas distribution system. Each incident involved distribution system facilities either being inaccurately mapped or facility specifications being incorrectly recorded which led to damage to the natural gas distribution system, gas releases, service interruptions and, in one instance, destruction of a building:

Castro Valley - September 17, 2010 A third-party contractor digging a new storm drain for the City of Castro Valley struck a 1-inch plastic gas service line at a location on San Miguel Avenue in Alameda County, causing the release of natural gas into the atmosphere, and a service interruption for four customers. PG&E did not accurately mark the pipe due to a mapping error caused by incorrect data in historical gas service records.

Morgan Hill - June 21, 2012 A third party contractor excavating to install a water line struck and damaged an unmarked 3/4-inch steel gas service line causing a release of natural gas; one customer lost gas service and two structures were evacuated as a precaution. The service line was a "stub" - a short section of pipe that is capped and without a riser - which had not been properly recorded.

Milpitas - October 10, 2012 (Milpitas 1) PG&E unexpectedly lost service to 987 customers while a gas construction crew was replacing a six-inch steel gas distribution main with a new four-inch plastic gas distribution main in the vicinity of Montague Expressway and Great Mall Parkway in Milpitas. PG&E had run an engineering model and determined that the system would have sufficient back feed to maintain service to customers but a non-emergency distribution main valve that the engineering model showed to be in the open position was actually in the closed position, preventing back feed to the affected customers. The valve position had been manually transcribed as "OPEN" in PG&E's model based on the plat sheet, which resulted in the inaccuracy in the model conducted prior to the distribution main transfer. The PG&E crew also failed to monitor pressure gauges while the job was in progress which would have shown the unanticipated loss of gas flow.

Milpitas - March 4, 2013 (Milpitas 2) A third party contractor dug into a two-inch plastic distribution main while excavating to install a storm drain. The facilities were not accurately marked; the crew had marked the pipe location six feet away from the actual pipe location possibly because the mark and locate technician was not able to use the most accurate tracer wire lead point for his location survey due to an unmarked connection.

Mountain View - July 30, 2013 A PG&E crew welded a tap fitting onto a 1¼-inch steel service line casing in Mountain View. The PG&E welding crew was unaware that the 1¼-inch steel service line casing had an inserted one-inch plastic line that melted causing a release of gas. The released gas was not noticed because the gas moved down the steel service line casing away from the work area and collected under a roadway. The crew was called back by local law enforcement when residents smelled gas and the crew worked through most of the night to locate and correct leak. The presence of the plastic insert was not shown on any PG&E records.

Carmel - March 3, 2014 A natural gas explosion destroyed a house located in the city of Carmel-by-the-Sea. Prior to the explosion, a PG&E welding crew was preparing to tie-in the gas distribution main along 3rd Avenue into the newly installed plastic main on Guadalupe Street. The crew welded a tapping tee onto a two-inch steel distribution main on 3rd Avenue, and did not know that the steel distribution main had an inserted and unmapped 1¼-inch plastic line, which was damaged by the welding and tapping process which caused the natural gas to escape the plastic main. Natural gas migrated into the residential structure and later resulted in an explosion.

On December 22, 2014, PG&E filed its Initial Report on the incidents which, as required by the Commission's Order, included "all reasons of fact and law" that supported a conclusion that PG&E "has committed no violation of law with respect to its gas distribution recordkeeping." PG&E also set forth its efforts to enhance gas distribution system recordkeeping accuracy, accessibility, and controls, as well as operational safety improvements. PG&E responded to the Order's allegations that it had violated statutory provisions and Commission regulations with its own legal analysis, including due process objections.

The assigned Administrative Law Judge convened a prehearing conference on March 9, 2015. A procedural schedule was adopted, and the parties presented issues of extending the *ex parte* ban to procedural inquiries and whether the

remedies to be considered in this proceeding should include ratemaking disallowances. Discovery for all parties was opened as of March 9, 2015. PG&E voluntarily agreed to a “quiet period” in which it would not propound discovery requests from August 14, 2015, to September 30, 2015.

On April 10, 2015, the assigned Commissioner issued her Scoping Memo and Ruling, which affirmed the preliminary categorization of this proceeding as adjudicatory with hearings needed. The assigned Commissioner also extended the prohibition on *ex parte* communications to procedural matters for all decision makers except the Presiding Officer. These inquiries need not be in writing, but parties will be held to a strict interpretation of the definition of “procedural” found in Rule 8.1(c) of the Commission’s Rules of Practice and Procedure.

The assigned Commissioner determined that the scope of the matter properly before the Commission was whether or not PG&E violated any provision of the Public Utilities Code, general orders, federal law adopted by California, other rules, or requirements, and/or other state or federal law, by its recordkeeping policies and practices with respect to maintaining safe operation of its gas distribution system. If any such violations are proven, then the scope of this proceeding will include whether fines may be imposed in this matter pursuant to Pub. Util. Code §§ 2107 and 2108, and remedial operational measures may be directed pursuant to Pub. Util. Code §§ 451, 701, 761, and 768.

The assigned Commissioner also determined that the scope of this proceeding will not include reopening any ratemaking issues from other proceedings; however, to the extent any remedial safety measures are ordered as a result of this Investigation, the scope of the proceeding will include whether PG&E should be authorized to seek ratemaking recovery of the cost of those measures in other proceedings.

On May 8, 2015, PG&E circulated its Final Statement of Facts which set forth undisputed facts from Safety & Enforcement Division's (SED) report.

The adopted procedural schedule allowed SED six months to prepare and distribute its supplemental testimony, PG&E about six weeks to prepare and distribute reply testimony, and then each party had five weeks for rebuttal testimony. Evidentiary hearings were held on January 19, 20 and 21, 2016, with 45 documents received into the evidentiary record. Three SED witnesses were cross examined by PG&E, and seven PG&E witnesses were cross examined by counsel for SED. The Utility Reform Network (TURN) presented testimony from its ratemaking and policy expert, which was received into the record by stipulation. The City of Carmel presented testimony from its Mayor and Chief of Police, which was also accepted into the evidentiary record by stipulation.

PG&E, SED, and the City of Carmel-by-the-Sea each filed and served a closing statement on January 25, 2016. The summary of evidence presented by each party set forth below is drawn substantially from the closing statements. Opening briefs were filed and served on February 26, 2016, by PG&E, SED, the City of Carmel-by-the-Sea, and TURN. The same parties filed Reply Briefs on April 1, 2016, when the matter was submitted for decision.

2. Evidence Presented and Recommended Sanctions

2.1. PG&E's Statement of Facts

PG&E's Statement of Facts addressed the six incidents listed in the Commission's Order Instituting this Investigation (OII) and included 77 numbered paragraphs. The Statement set out numerous details regarding each incident including times, locations, and exact events.

2.2. Safety & Enforcement Division

SED contended that the record established by a preponderance of the evidence that PG&E committed the violations of law as alleged in the OII and that these violations warrant a substantial penalty. SED explained that PG&E largely does not dispute the allegations and acknowledges the seriousness of these events.

SED stated that these failures are just a sample from within a significantly larger group of PG&E's gas distribution recordkeeping-related incidents, and other recordkeeping errors. SED illustrated PG&E's failure to mitigate its loose controls over gas distribution records with the Mountain View and Carmel incidents, where on July 30, 2013, a PG&E crew melted an unknown and unmapped plastic insert in Mountain View, causing a release of gas. Seven months later, on March 3, 2014, another PG&E crew tapped into a similarly unknown and unmapped plastic insert in Carmel, causing a release of gas, and eventually a house explosion. SED's experts concluded that: "PG&E's handling of the incident at Mountain View (07/30/13), a clear precursor of the incident at Carmel (03/03/14), supports the conclusion that PG&E has failed to comply with ... 'learning from experience' regulations; until an incident is sufficiently high profile that action must be taken." Another example offered by SED was that PG&E admitted that "all the leak repairs done between 1979 and 1991 in the DeAnza Division are missing" and to this day have not been found. SED also showed that on April 4, 2014, PG&E admitted a recordkeeping violation associated with the Mountain View Incident and that PG&E agreed with the Safety & Enforcement Division's description of the six incidents identified in the OII.

SED recommended that the Commission order PG&E to pay a significant penalty for the violations in order to protect public safety and hold PG&E accountable for its practices. Specifically, SED recommended that the Commission order PG&E to pay a fine of \$111.926 million to the General Fund and submit numerous compliance filings with reports.

2.3. PG&E

PG&E argued that as defined in the Scoping Memo, the issue in this proceeding is whether PG&E's recordkeeping policies and practices for maintaining the safe operation of its gas distribution system violated applicable laws or regulations. PG&E supported the Commission's thoughtful review of this question, and appreciated the opportunity provided by the hearing to explain the many initiatives it has undertaken to improve its recordkeeping and the safety of its operations. PG&E agreed with SED experts, that there will always be some level of risk in gas distribution. While acknowledging that it has not attained perfectly accurate records, PG&E explained that the hearing demonstrated that the Company is firmly committed to continuous improvement in pursuit of that aspirational goal. While events such as the incident in Carmel are regrettable and unacceptable, PG&E contended that, as part of its journey toward becoming the safest and most reliable gas company in the country, it is on the forefront of the industry in implementing innovative practices and initiatives aimed at minimizing the chance of such an event occurring in the future.

On the specific topic of its records, PG&E stated that it recognized the seriousness of the incidents and agreed to the facts of those incidents. PG&E admitted that its records, like those of every other pipeline operator, are not perfect, which is exactly consistent with SED's expert testimony that

imperfections in maps and records exist throughout the industry, and concur that they are not aware of any operator that has perfect records, or is even in full compliance with regulations. As to its operating pressure records, SED's experts also did not dispute PG&E's alternative procedure for setting maximum allowable operating pressure (MAOP) in the absence of historical records, and PG&E's analysis shows it is safe and appropriate to use.

PG&E touted the corrective actions it has taken to improve its recordkeeping and safety performance as meeting – and in many cases exceeding – industry best practices. PG&E stated that SED's expert witnesses concluded that nine of the 24 measures PG&E has adopted are considered industry best practices that have been shown to produce superior safety results, and an additional eight of these measures are considered innovative practices, extending a step beyond industry best practices.

PG&E also touted its safety performance. PG&E agreed with SED's experts that the frequency of excavation damage on an operator's distribution system is an indicator of both its safety performance and the accuracy of its distribution system recordkeeping. PG&E stated that it successfully locates and marks nearly 99.98% of the more than a half million requests it receives in a typical year, that it has the lowest rate of excavation damage per 1,000 tickets in California and, according to Pipeline and Hazardous Materials Safety Administration (PHMSA) data, is in the top quartile compared to operators in other states.

PG&E explained that the central disagreement between the parties was the appropriate standard for citing violations related to recordkeeping. PG&E opposed SED's proposed standard of care for this proceeding that would require PG&E to prevent all "impactful events" related to recordkeeping errors PG&E

pointed out that SED's proposed standard is nowhere defined in the regulations and has not been adopted by any regulator, and that SED's experts seriously doubt that any operator in the country is in compliance with it. PG&E presented its own PHMSA experts who proposed a standard of care firmly grounded in regulations and practicality - an operator's reasonable compliance with the regulations and continuous improvement in its maps and records, based on the best available information, over time. PG&E concluded that this standard is repeatable, predictable, and implementable.

PG&E opposed the fines proposed by other parties.

2.4. City of Carmel-by-the-Sea

The City stated that PG&E was fined \$10.8 million dollars for blowing up a home in Carmel two years ago because its practices, records and safety protocols failed in a catastrophic manner. Carmel contended that PG&E's gas transmission system was not safe and operated in violation of Section 451 of the Public Utilities Code and its records system was, and arguably still is, incompetent to run a gas utility in the 21st century.

The City explained that almost two years after the explosion, Carmel's City Council and residents are still fearful for their safety when PG&E crews are working in City streets and are fearful of what dangers lie below in PG&E's labyrinth of underground pipelines.

Carmel supported SED's position, and found PG&E's arguments and witnesses' testimony presented at the evidentiary hearings in an effort to show the utility did not violate the law to ring hollow and were in bad faith; so much so that Carmel believed PG&E submitted misrepresentations to the Commission. Carmel concluded with the hope that the Commission would see through

PG&E's too-little-too-late excuses and promises regarding the safety of its distribution system.

Carmel proposed fines of up to \$651 million, with supporting calculations. Carmel also recommended linking executive compensation to safety objectives, appointing independent monitors for PG&E's system, and ordering PG&E to compensate Carmel for its expenses.

2.5. TURN

TURN's ratemaking expert testified that PG&E should not be allowed to pass on remedial costs to ratepayers and that this outcome is not just a matter of economic fairness. TURN explained that increasing number of households are struggling to afford electric and gas services from PG&E, creating health and safety issues. TURN pointed out that PG&E's customers have endured high rate increases in recent years and face additional steep rate hikes. In PG&E's 2014 general rate case, the Commission approved overall revenue requirement increases of 6.9%, 4.6% and 5% for 2014, 2015 and 2016, a total three-year increase of over 16%.¹⁴ For gas distribution service, the increase was even more extreme, 20.4% in 2014, followed by the above-described attrition year increases, for a three-year total revenue requirement increase of 30%. TURN stated that gas customers are threatened by another draconian rate increase in the pending Gas Transmission and Storage case, where PG&E has requested a 118% increase in revenue requirements for the 2015-2017 period. TURN concluded by showing that customers are already suffering from the large revenue requirement

increases that the Commission has approved for PG&E in the last five years, with PG&E's disconnections for non-payment steadily rising.¹

TURN recommended that the Commission extend to gas distribution recordkeeping each of the 21 transmission recordkeeping remedies adopted by the Commission in Decision (D.) 15-04-024. TURN also argued that the Commission should order PG&E to undertake proactive and systematic efforts to identify and correct in its maps and records all unmapped or inaccurately mapped records of plastic inserts in its distribution system and order this work to be completed within three years. With a similar proposed timeline, TURN asked the Commission to require PG&E to undertake proactive and systematic efforts to identify and correct in its maps and records all unmapped or inaccurately mapped stubs in its distribution system. TURN also would like PG&E to take the necessary steps to establish MAOP in compliance with applicable law and, within 90 days, to submit a compliance plan. Finally, TURN recommended that compliance costs for today's decision should be allocated to shareholders.

3. The Commission's Previous Scrutiny of PG&E's Natural Gas System Recordkeeping

On March 24, 2011, the Commission issued D.11-03-047 where it began the post-San Bruno revelations of the state of PG&E's natural gas transmission service records. In that decision, the Commission found:

PG&E's Report showed that it had pressure test records or historical maximum pressure data to support its MAOP for 92% of its pre-1970 pipeline and 93% of its post-1970 pipeline. PG&E's Report raises additional questions because PG&E is unable to locate records to

¹ Hearing Exh. 3.

support the MAOP it is using for 8% of its pipeline installed prior to July 1, 1970, and even more troublingly for 7% of its pipeline installed after that date. In sum, after a multi-month search effort, PG&E is currently operating 8% of its natural gas transmission system without documents supporting the purported MAOP. Further, undermining confidence in the Strength Test Pressure Reports that it has found, PG&E admits that for 270 miles out of 1,018 miles it claims to have complete pressure test records, the Strength Test Pressure Report footage tested does not correspond to the pipeline High Consequence footage.² Again, the lack of consistency between these data raises additional questions.

The Commission's order to show cause was subsequently resolved by settlement in D.12-04-047 with PG&E paying a \$3 million fine.

Subsequently, in D.12-12-030, the Commission set out its primary directives to PG&E regarding safe operation of the natural gas system:

This decision requires Pacific Gas & Electric Company (PG&E) to continue its work towards becoming a safe natural gas transmission system operator. The specific actions we authorize and direct today are essential steps on a permanent safety journey that PG&E, its officers, employees, and shareholders, must internalize as a part of every action they will take over the decades that the natural gas pipeline system will be in place. The inherent danger to the public created by a natural gas transmission and distribution system requires a profound and unwavering commitment to safe operations. As described in detail below, the record shows evidence that, at one time, PG&E had the corporate ability and focus to go beyond nominal regulatory compliance to propose and create a long-term engineering-based safety program for the Commission's consideration. The current challenge to PG&E, and this Commission, is that attaining the goal of future decades of safe operations will require detailed, repetitive, and often seemingly unnecessary actions, which are likely to be expensive, with the

² PG&E Report at 13.

overall goal of no significant incidents. Ensuring public safety requires that PG&E meet this commitment, and today's decision lays the groundwork for this Commission to oversee and supervise PG&E's safety operations.

Specifically, with regard to PG&E's recordkeeping deficiencies, the Commission found:

PG&E estimates that it will spend a total of \$271.9 million in collecting, reviewing and verifying the documents related to determining the MAOP of its gas transmission pipeline segments. PG&E states that its shareholders will fund all document costs related to pipeline installed after 1970, and costs incurred in 2011. PG&E is seeking Commission authorization to include in revenue requirement a total of \$107.1 million for recovery from ratepayers in costs related to 2012 and 2013 records validation.

PG&E forecasts that its Gas Transmission Asset Management Project, a computer data base system upgrade, will cost a total of \$115.7 million during 2012, 2013, and 2014, which PG&E proposes to include in revenue requirement. In total, PG&E is seeking Commission authorization to include \$222.8 million in revenue requirement for 2012, 2013, and 2014.

As set forth below, we find that PG&E has not justified including the costs of its gas system records search and organization projects in revenue requirement. PG&E became responsible for its natural gas transmission system the day it installed facilities and equipment for the system. That responsibility includes creating and maintaining records of the location and engineering details of system components. Over the years, PG&E has sought and obtained ratepayer funding for its recordkeeping functions. PG&E has imprudently managed its gas system records such that extensive remedial work is now needed to correct past deficiencies. Having created the need for this remedial work by its imprudent historic document management practices, PG&E has not shown by a preponderance of the evidence that the costs of the current document search and organization projects can be included in revenue requirement and that the resulting rates will be just and reasonable.

Therefore, based on the history of PG&E's gas system record improvement project described above, we find that PG&E has not justified including the costs of its gas system record integration projects in revenue requirement, and we disallow PG&E's request. Today's decision addresses PG&E's request to include costs of its gas system record integration project in revenue requirement and we express no opinion on whether PG&E's natural gas system records violated federal or state law or regulations because those questions are pending in I.11-02-016.

On February 24, 2011, the Commission issued Investigation (I.) 11-02-016 to address allegations that PG&E had violated federal and state law and Commission regulations with regard to its operations and practices with respect to facilities records for its natural gas transmission system. This was the Commission's most comprehensive review of PG&E's recordkeeping:

This decision finds that Pacific Gas and Electric Company (PG&E) has violated American Society of Mechanical Engineers B.31.8, Pub. Util. Code § 451, General Order 112, and regulations set forth in Part 192 of Title 49 of the Code of Federal Regulations for failing to maintain its gas transmission pipeline records in a manner to allow safe operation of its gas transmission pipeline system. PG&E is also found to have violated Rule 1.1 of the Commission's Rules of Practice and Procedure for providing incorrect and misleading responses to data requests to Commission staff. This decision finds that PG&E committed 33 violations, many of them continuing for years, for a total of 350,189 days in violation.

The Commission consolidated its tabulation of the fine in three Investigations related to the San Bruno explosion³ and adopted one Final decision imposing fines, D.15-04-024:

³ OII 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, I.12-01-007; OII on the Commission's Own Motion

Footnote continued on next page

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 pipelines in areas of higher population density. The Commission hereby imposes a fine and other penalties and remedies totaling \$1.6 billion. This consists of:

- \$850 million in future gas infrastructure improvements related to transmission pipeline safety to be paid for by PG&E shareholders;
- \$300 million fine payable to the General Fund;
- \$400 million bill credit to PG&E's gas ratepayers in the form of a one-time bill credit; and
- Approximately \$50 million to implement over 75 remedies proposed by the Commission's SED previously called the Consumer Protection and Safety Division (CPSD)⁴ and other intervenors to enhance pipeline safety.

The total of \$1.6 billion in penalties and remedies imposed on PG&E in this decision, to be paid for by PG&E shareholders, when added to the disallowances already adopted in Rulemaking 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 \$2.2 billion.

into the Operations and Practices of Pacific Gas and Electric Company with Respect to Facilities Records for its Natural Gas Transmission System Pipelines, I.11-02-016; OII 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, I.11-11-009.

⁴ Prior to January 1, 2013, SED had been called the Consumer Protection and Safety Division (CPSD). However, for consistency and to avoid confusion, D.15-04-024 continued to refer to the SED by its former name, CPSD.

The Commission specifically used recordkeeping deficiencies to justify its total fine and disallowance program:

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. We 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. Accordingly, PG&E must provide a bill credit of \$400 million to ratepayers, and that amount must be absorbed by shareholders.⁵

In Appendix E to that decision, the Commission set forth its Adopted Remedies for all of the Investigations from all of the parties. The remedies were extensive and on-going. The adopted remedies for the recordkeeping investigation are reproduced in Attachment A to today's decision.

4. Discussion

Pursuant to Public Utilities Code Section 451 each public utility in California must:

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.

The duty to furnish and maintain safe equipment and facilities falls squarely on California public utilities, including PG&E.

⁵ D.15 04 024 at 87.

4.1. Burden of Proof and Standard of Proof

In an investigatory proceeding launched by Commission staff in response to allegations of violations of applicable safety requirements, such as the instant proceeding, SED bears the burden of proof.⁶

With the burden of proof placed on SED, the Commission has held that the standard of proof that SED must meet is that of a preponderance of evidence. Preponderance of the evidence usually is defined in terms of probability of truth, e.g., such evidence as, when weighed with that opposed to it, has more convincing force and the greater probability of truth.⁷ In short, SED must present more evidence that supports the requested result than would support an alternative outcome.

4.2. Standards for Imposing Fines

In determining the penalty to be imposed for violations found in today's decision, we are guided by D.98-12-075, which identified the following factors:⁸

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

⁶ Communications TeleSystems International, D.97-05-089; 72 CPUC2d 621, 633-4.

⁷ In the Matter of the Application of San Diego Gas & Electric Company for a Certificate of Public Convenience and Necessity for the Sunrise Powerlink Transmission Project, D.0812-058, *citing* Witkin, Calif. Evidence, 4th Edition, Vol. 1, 184.

⁸ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates* (D.98-12-075), 84 Cal.P.U.C.2d 155 186-190.

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, our investigation into the San Bruno incident.⁹

4.2.1. 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.”¹⁰

This factor is reflected in our analysis of the violations and determination that certain incidents show systemic failure on PG&E’s part and other incidents are isolated deviations in an otherwise generally compliant system. In today’s decision we assess proportionally far greater monetary penalties for systemic failures than for isolated violations. In this way, systemic failures are accorded greater severity than isolated violations.

4.2.2. 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,

⁹ D.15-04-024 at 9.

¹⁰ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C.2d at 188.

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.¹¹

As set forth below, we contrast PG&E’s response to the missing records showing actual system operating pressure between 1965 and 1970, with its response to the missing DeAnza division A Form leak repair records. We find that PG&E’s conduct with regard to the operating pressure records was a reasonable means to identify, analyze, and resolve the missing records. In contrast, PG&E’s response or, more accurately, lack thereof, to the missing DeAnza records requires a significant fine to deter further such conduct.

4.2.3. 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.”¹²

Consequently, the Commission must “adjust fine levels to achieve the objective

¹¹ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C.2d at 188-189.

¹² *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C. 2d at 189.

of deterrence, without becoming excessive, based on each utility's financial resources.”¹³

In D.15-04-024, the wrongdoing was extreme and fines at the outer boundary were required. Here, deterrence will be our primary requirement. PG&E, however, is a large corporation with substantial financial resources.

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

The Commission has held that a fine should be tailored to the unique facts, or totality of circumstances, of each case. When making this assessment, the Commission considers facts that tend to mitigate or exacerbate the degree of wrongdoing. In all cases, the harm will be evaluated from the perspective of the public interest.

Here, the wrongdoing implicates safe operation of a natural gas system, which is by its very nature dangerous. Complete compliance with safety requirements is essential. The public interest is intense with safety-related violations as clearly shown in the testimony from the City of Carmel-by-the-Sea.

We tailor our fines in today’s decision to address two distinct types of violations – systemic and incidents. This reflects the specific facts of each violation.

4.2.5. 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.”¹⁴

¹³ *Id.*

In Resolution ALJ-277, on April 19, 2012, the Commission affirmed Citation No. ALJ-274 2012-01-001 Issued to Pacific Gas and Electric Company for Violations of General Order 112-E. There, the Commission upheld a fine of \$16,760,000 for PG&E's failure to conduct leak surveys *ever* on almost 14 miles of distribution mains. Such surveys are required every five years. In December 21, 2011, a PG&E employee discovered 16 plat maps containing approximately 13.83 miles of gas distribution mains and 1,242 services that were not included in PG&E's leak survey schedule since the mains and service were installed; the earliest of which was in 1999. PG&E promptly conducted the overdue surveys, found 23 leaks, and repaired a serious leak immediately.

The violations addressed in today's decision can be summarized as: poor recordkeeping leading to mistakes with facilities, with little actual harm but a serious potential for great harm. Thus, the facts of the leak survey failure set forth above are a reasonably comparable factual circumstance. There, PG&E's failure to properly include almost 14 miles of distribution mains in its leak survey schedules, i.e., poor recordkeeping, led to delay in discovering 23 leaks. Both fact patterns show recordkeeping deficiencies leading, fortunately, to little actual harm, but with the potential for significant harm.

SED agreed that the leak survey citation was a comparable decision but also pointed to Commission decisions imposing fines in cases with fatalities, e.g., San Bruno, D.15-04-024, (eight fatalities, fined \$1.2 billion) and the Rancho Cordova natural gas explosion, D.11-11-001, (one fatality, fined \$38 million). SED stated that the Commission "should not wait for another fatality before

¹⁴ *Standards of Conduct Governing Relationships Between Energy Utilities and Their Affiliates*, 84 Cal. P.U.C. 2d at 190.

holding PG&E accountable for conduct that resulted in a non-fatality house explosion.”¹⁵

The fact patterns we address in today’s decision do not include fatalities or great property damage. Therefore, we conclude that the decision which involves the most reasonably comparable factual circumstances is the leak survey citation, ALJ-277. Thus, we compare the total fine in today’s decision of \$25,626,000 to the leak survey fine of \$16,760,000; today’s fine is significantly more, especially when the previously imposed Carmel citation fine of \$10,850,000 million is included.¹⁶ The total of \$36,476,000 for today’s violations and the Carmel citation is more than twice the leak survey fine in Resolution ALJ-277. This is a substantial difference. As required by our standard, we find that this additional increment is justified because the errors are systemic; that is, there could be thousands of unmapped plastic inserts in PG&E’s system, for example.

Therefore, we conclude that the additional fine of \$25,626,000 is comparable to other reasonably similar Commission precedent.

4.3. No Material Factual Disputes

As described above, on May 8, 2015, PG&E circulated its Final Statement of Facts which set forth undisputed facts from SED’s report. Accordingly, no disputed issues of material fact were litigated in this proceeding. The legal and policy implications of the facts, however, were hotly contested.

SED argued that the standard of care for a gas system operator is complete compliance with each and every regulation at all times.

¹⁵ SED Opening Brief at 93.

¹⁶ Resolution ALJ-323, Resolves Appeal of Citation ALJ-274 2014-11-001 (December 3, 2015)

PG&E disagreed and contended that perfection is not realistically attainable and gas system operators should not be held to a standard that neither it, nor any other public utility, can meet. From this contention, PG&E concluded that it has committed no violations of law or regulation.

SED disputed PG&E's legal analysis. SED presented a tabulation of a fine payable to General Fund that used a "base fine" which was "compounded" daily, weekly, or monthly for eight categories of violations.¹⁷ PG&E challenged SED's tabulation as being inconsistent with applicable law and Commission precedent.

As set forth above, the Commission has been addressing PG&E's failings with regard to its natural gas system operations generally and recordkeeping particularly for over the last five years. The Commission has imposed hundreds of million dollars in fines and disallowances as well as mandating extensive and expensive remedial measures designed to address PG&E's recordkeeping deficiencies. See, e.g., Attachment A to today's decision.

Here, SED has brought forward allegations of recordkeeping deficiencies causing natural gas distribution system damage and threats to safety. To analyze these allegations, we have grouped the allegations based on whether the alleged conduct represents wide-ranging behavior or is limited to a few instances of violations in a general context of compliance.

The systemic issues are those with broad impact and which will require equally broad remedies to address any violations.

¹⁷ SED Opening Brief at 76 - 89.

Incidents are defined as isolated violations where PG&E's conduct represented a deviation from general compliance. We reject PG&E's suggestion that some level of compliance failure is acceptable and excusable because perfection is not attainable. A violation is a violation. The proper fine that should be assigned to an isolated violation in a generally compliant program, however, is very different from the fine level needed to bring necessary changes to a noncompliant system.

As analyzed and imposed below, we find that allegations of poor management of plastic insert mapping errors and the missing DeAnza Division leak repair records from 1979 to 1991 are properly viewed as allegations of systemic violations. These allegations and any sanctions found necessary will be examined in the context of a system-wide need for change.

In contrast, allegations of numerous incidents of mapping deficiencies and resultant marking errors occur in the context of PG&E locating and marking its facilities in hundreds of thousands places each year. PG&E witnesses testified, and SED did not dispute, that PG&E has an accuracy rate for locating and marking its facilities that is well over 99%. A system that works over 99% of the time is not a *system* in need of improvement. The isolated failures, however, must draw consequences to create incentives for constant improvement in execution. We will review the incidents listed below in the context of sanctions designed to achieve overall compliance success.

4.4. Analysis of Violations and Imposition of Fine

4.4.1. Violations and Fines for Systemic Issues

4.4.1.1. Failure to Minimize Possibility of Recurrence – Plastic Inserts

PG&E violated federal and state law and Commission regulations across its natural gas system in its failure to promptly and comprehensively correct

mapping errors of plastic inserts in the distribution system. As set forth in the Code of Federal Regulations, 49 CFR § 192.617:

§ 192.617 Investigation of failures.

Each operator shall establish procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of a recurrence.

The results of such investigations can then form the basis for compliance with 49 CFR 192.605(b)(8), which requires a natural gas system operator to periodically review its operating manual to determine the effectiveness and adequacy of procedures and to modify procedures where deficiencies are found.

There is no dispute that on July 30, 2013, a PG&E crew in Mountain View welded a tap fitting into the a steel service line that, unknown to the welder, contained a plastic insert. PG&E stated that the plastic insert was installed sometime between 1972 and the mid-1980's and was not shown on the construction documents nor on the plat map. The welding caused the plastic insert to melt and gas to be released, which migrated through the soil and collected under a nearby paved road. PG&E learned of the leak five hours later when the local fire department called them back because the pavement was rising and residents smelled gas.

The PG&E Internal Gas Incident Review specified each step in the ensuing leak repair.¹⁸ The crew stopped the gas flow at approximately 7:00 p.m., resulting in seven customers losing service. As a precautionary measure, local

¹⁸ Hearing Exh. 6 at Attachment 48.003.

law enforcement decided to evacuate surrounding buildings and close the street pending PG&E's repairs. Such repairs were completed at 12:30 a.m.

The Internal Gas Incident Review document, however, goes on to analyze the "root cause" of the incident and propose "lessons learned/recommendations." These sections of the Incident Report are set forth below:

Root Cause

The inserted 1" plastic service was not mapped. Under current work procedures and processes, GC crew would not have known the plastic service was inserted inside the steel sleeve at the time they welded the fitting.

Lessons Learned/Recommendations

There needs to be new work procedures for installation and testing methods to determine and verify in the file if a gas service or main was inserted.

The record for the last leak repair for this gas service was missing. Upon further research, all the leak repairs done between 1979 to 1991 in the DeAnza Division are missing. First course of action is to locate these missing records or determine they can't be found. Second course of action is to ensure all changes to our facilities during emergency repairs are captured with our current mapping and documentation process.

The incident report shows a "review" date of August 27, 2013.

PG&E's explained in its testimony for this proceeding that the recommendations were not followed immediately and that it was not until the Carmel house explosion, in March 2014, similarly caused by an unmapped plastic insert, that PG&E took needed corrective action:

This recommendation was not immediately followed, and new procedures were not implemented until after the Carmel incident for several reasons, including that CAP was a brand-new program at the time, PG&E was moving from the ECTS database to the new CAP database, the Internal Gas Incident Review was not widely

circulated, and personnel may not have fully appreciated the import of the incident at the time.

...

At the time of the Mountain View incident, PG&E measured risk based on actual injury or actual property damage, which in this case had been relatively low. It was not deemed a high risk event at that time that would have warranted issuing a company-wide stand down or advisory. Under new risk assessment protocols, an incident like Mountain View would undergo increased scrutiny, and corrective actions would be implemented on a priority basis because PG&E now considers both actual harm and potential harm in making a risk determination.¹⁹

There is no dispute that seven months later, on March 3, 2014, in Carmel, a PG&E crew welding and tapping a save-a-valve on a steel pipe to install a pressure gauge unknowingly tapped into an unmarked plastic insert. The plastic insert had been installed in 1997 or 1998 and was not reflected on the plat map. The melted plastic insert caused a gas leak which migrated to a nearby sewer line and into the home, where the gas accumulated and ignited at 11:15 a.m. The Mayor of Carmel testified that the “home exploded,” sending “building debris just over the heads of crews and residents walking nearby,” and “shrapnel was hurtled into neighboring houses and windows blown in by shock waves.”²⁰

In response to the Carmel incident, PG&E took several actions. On March 24, 2014, PG&E issued a memorandum to “all personnel performing welding and/or tapping on distribution facilities” instructing these personnel to immediately implement “measures which must be taken to identify whether or

¹⁹ Hearing Exh. 4 at 3-27 to 3-28.

²⁰ Hearing Exh. 44 at 3.

not a steel pipe has been inserted with a plastic pipe.”²¹ The memorandum set out record review, jobsite review and physical verification steps to be taken prior to any physical work at the site, and to stop work preparation and contact a supervisor if any indications of plastic inserts are observed.

PG&E also explained in its testimony that it has incorporated this review into its Gas Carrier Pipe Checklist which includes five specific “signs of plastic inserts” that must be specifically verified before beginning welding or tapping on a steel line.²²

PG&E further explained that it has developed a process to use a Bolt-on Saddle Punch Tee, which is bolted on, rather than welded to the target pipe. With this device, welding is not used so there is no risk of melting any inserted plastic pipe.²³

In briefs, PG&E has stated that it regrets the property damage and inconvenience to the public from the incidents in this investigation and has agreed that its conduct:

... viewed in hindsight, did not meet the expectations that PG&E sets for itself when it comes to safety risk mitigation, and coordination with its regulators . . . [P]articularly as related to the Carmel and Mountain View incidents, the issue of unmapped plastic inserts, and PG&E’s alternative method for setting MAOP on certain of its distribution systems – PG&E believes it could have done better.²⁴

²¹ Hearing Exh. 7 at 96.001.

²² Hearing Exh. 5 at W015.002.

²³ Hearing Exh. 4 at 5 – 10.

²⁴ PG&E Reply Brief at 1.

As noted above, PG&E is required pursuant to federal regulations to learn from accidents and failures in its system and to analyze such incidents, determine the causes of the failure and minimize the possibility of a recurrence. Where PG&E finds a deficiency in its operating and maintenance procedures, it has an obligation to modify those procedures.

We review PG&E's response to these two incidents where unmapped plastic inserts were unintentionally melted by welding, resulting in significant gas leaks and substantial property damage in one case. We find that PG&E failed to comply with 49 CFR § 192.617 in that PG&E did not properly analyze the first instance and take the needed steps to modify its operation and maintenance procedures to properly address unmapped plastic inserts as required by 49 CFR 192.605(b)(8).

Therefore, we find that PG&E violated 49 CFR §§ 192.617 and 192.605(b)(8) across its natural gas system by its failure to promptly and comprehensively establish protocols to address mapping errors of plastic inserts in the distribution system after the July 30, 2013 Mountain View incident. We find that PG&E failed to comply with 49 CFR § 192.617 in that PG&E did not properly analyze the first instance and take the needed steps to minimize the possibility of recurrence.

SED argued that the violation began on the date of the first instance and continued until the date of the second instance, when PG&E belatedly instituted corrective measures to address the possibility of recurrence. Pursuant to §§ 2107 and 2108, SED recommended the maximum fine of \$50,000 per day for this continuing violation. We agree and impose a fine of \$10.8 million.

We conclude that PG&E was in violation of 49 CFR §§ 192.617 and 192.605(b)(8) immediately following the Mountain View incident on July 30, 2013 until the date of the Carmel incident on March 3, 2014, when, as set forth above,

PG&E began instituting changes to its operating procedures to better detect unmapped plastic inserts. Each day of this continuing violation is separate offense pursuant to § 2108. This violation should be assessed the maximum per violation fine due to the potential for human injury and property damage as illustrated by the incident descriptions set out above. Thus, we multiply 216 days of violation times the applicable statutory maximum amount of \$50,000 for a total fine payable to the General Fund of \$10.8 million.

4.4.1.2. MAOP Records

PG&E does not deny that in the early 1970's it was unable to locate paper records of the actual operating pressure for the time period 1965 to 1970 for 243 of its distribution systems. Pursuant to 49 CFR § 192.619(c), the actual highest operating pressure during that time period can be used to set MAOP. That section, however, does not specify the means necessary to prove actual highest operating pressure. For those systems where PG&E could locate a "pressure log or similar paper record," PG&E used those records to determine highest actual operating pressure during that time period and, thus, MAOP. However, for the 243 systems without records, PG&E adopted a policy in 1978 of using certifications of knowledgeable PG&E personnel or the operating pressure at the time of a successful leak survey as a substitute for the missing pressure log or other paper record.

SED argued that PG&E was obligated to retain those pressure logs from 1965 to 1970 and that these missing records violate federal requirements. SED recommended the maximum per violation fine then applicable from January 12, 1971, (the effective date of General Order 112-C, which extended 49 CFR § 192.619(c) to California) to September 30, 2015 (the date of SED's report). SED

“compounded” this amount monthly and reached a total recommended fine of \$7.12 million.

PG&E contended that federal regulations allow historical operating pressure to be used to set maximum allowable operating pressure where the pipeline was in service on July 1, 1970 and has not been subjected to subpart J strength tests:

§ 192.619(c) The requirements on pressure restrictions in this section do not apply in the following instance. An operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the 5 years preceding the applicable date in the second column of the table in paragraph (a)(3) of this section. An operator must still comply with § 192.611.

As explained by PG&E’s Vice President, Gas Asset & Risk Management:

The subsection of the federal regulation, 49 CFR 192.619(c) does not identify the specific records the operator must use to determine the highest actual operating pressure, and thus the MAOP.

...

PHMSA [Pipeline and Hazardous Materials Safety Administration] has provided guidance to pipeline operators on this issue. . . . In 1986, a Department of Transportation pipeline inspector requested clarification from the Office of Pipeline Safety (OPS) a section of PHMSA about the requirements of [§ 192.619(c)]. The inspector asked whether “the regulations require that the operator have records to substantiate the pressure used to establish MAOP per § 192.619(c).?” In an internal exchange, which was then made public guidance, OPS responded that “[t]he regulations do not require ‘records,’ however, enforcement personnel have to apply judgment as to what they will accept to substantiate the operator claim. OPS then went on to say that sworn statements by the operators would be adequate. . . .”

PG&E concluded that its policy since 1978 of using pressure logs or other records, where available, and accepting sworn statements from its personnel or successful leak test records, is consistent with PHMSA interpretation of the evidence needed to establish highest actual operating pressure as required by 49 CFR § 192.619(c). PG&E also documented repeated disclosures of this policy to Commission staff over the years, with no objections raised.

We conclude that SED has failed to meet its burden of proving by a preponderance of the evidence that PG&E violated 49 CFR § 192.619(c) by failing to have paper records of highest actual operating pressure for 243 distribution lines after 1970. The plain words of 49 CFR § 192.619(c) do not require paper records, although PG&E concedes that paper records of pressure logs or similar documents are the type of evidence they preferred to use to demonstrate highest actual operating pressure between 1965 and 1970. Nevertheless, 49 CFR § 192.619(c) does not specify actual copies of written pressure records.

Critical to our analysis is PG&E's response to the missing documents. In the 1970's, PG&E identified the distribution systems for which it was missing actual operating pressure documents and developed best available information sources; in this case, employee certifications or successful leak test data. PG&E adopted the use of these substitute documents, when needed, as a Standard Practice in 1978. PG&E systematically obtained the substitute documents and used them to establish highest actual operating pressure as provided in 49 CFR 192.619(c). So far as the record shows, PG&E has consistently and openly to regulators adhered to its 1978 Standard Practice. PG&E detected and corrected, so far as possible, this set of missing records decades ago.

Therefore, we conclude that PG&E is not in violation of 49 CFR 192.619(c) as regards the type of records it used to establish the highest actual operating

pressure of the 243 distribution systems in the 1970's. As set forth in the next section, we will contrast PG&E's treatment of the missing operating pressure records from 1965 to 1970 with its more recent treatment of the missing DeAnza leak repair records.

4.4.1.3. Failure to Analyze Incident and Minimize Possibility of Recurrence - Missing DeAnza Leak Repair Records 1979 – 1991

PG&E does not dispute that the paper leak repair records from 1979 to 1991 for the DeAnza Division are missing. Known informally as "A Forms," these documents are completed by leak repair crews and specify the location of the leak and the details of the repair.²⁵ PG&E explained that all needed information from the A Forms is entered into its electronic leak repair records database where the complete information from the 1979 – 1991 DeAnza leak repairs is currently preserved and available for gas system operations.²⁶

SED alleged that PG&E violated 49 CFR §§ 192.603(b), 192.605(a), 192.13(c) and Pub. Util. Code § 451 for failing to have controls in place to ensure maintenance and update of its operating maps and data. SED recommended a fine of \$9.496 million tabulated by finding one violation per day for each day of the time period for which records are missing, January 1, 1979, to December 31, 1991.²⁷ SED also recommends a fine of \$8.6 million for violation of § 451 for failing to disclose known facts about the missing DeAnza records.²⁸ Finally, SED

²⁵ Hearing Transcript at 468.

²⁶ PG&E Reply Brief at 36.

²⁷ SED Opening Brief at 80.

²⁸ SED Opening Brief at 84.

recommended a fine of \$1.29 million for violations of failing to properly analyze the failings that resulted in the loss of records and take steps to prevent future repeats.

PG&E pointed to its Corrective Action Program (CAP) as an important improvement in its overall gas system operations, and particularly records management.²⁹ Any issue can be submitted to the CAP, potential failures, incidents, dig-ins or any unsafe situation, and employees or contractors can submit issues anonymously. The database is open to employees to view. All system map corrections are made through the CAP process. Each CAP item is reviewed by the Notification Review Team with one business day, prioritized, and assigned to an “issue owner” for resolution. PG&E stated that the CAP process brings in a stream of real time information on system operations, and allows for higher risk items to be brought to management’s prompt attention and can result in a Safety Stand-Down, a temporary halt of related work while an issue is analyzed and mitigation measures developed.³⁰

On February 18, 2014, a CAP notification was initiated to locate the missing DeAnza A Forms. On June 16, 2014, the User Responsible reported his conclusion that “the extensive search for these records was unsuccessful.”³¹ The record shows no further action by PG&E to address this issue.

In contrast, as set forth above, when PG&E determined that it did not possess needed actual operating pressure records from 1965 to 1970, PG&E undertook a systematic effort to catalogue the distribution systems for which

²⁹ PG&E Opening Brief at 22 - 24.

³⁰ Hearing Exh. 4 at 5 - 23 to 25.

³¹ Hearing Exh. 6 at W049.001-2.

records were missing and to prepare best available documentation of the actual operating pressures during those years. For the De Anza A Forms, however, PG&E conducted an extensive but unsuccessful search and then just stopped. PG&E undertook no further efforts to analyze the risk to the system created by these missing records, to develop any needed mitigation measures, or to implement steps to ensure that there will be no recurrence of lost A forms.

Therefore, we conclude that PG&E violated federal and state law and Commission regulations across its natural gas system in its failure to promptly and comprehensively analyze the impacts of the missing A Forms in De Anza and institute such corrective actions as may be possible. As set forth in the Code of Federal Regulations, 49 CFR § 192.617:

§ 192.617 Investigation of failures.

Each operator shall establish procedures for analyzing accidents and failures, including the selection of samples of the failed facility or equipment for laboratory examination, where appropriate, for the purpose of determining the causes of the failure and minimizing the possibility of a recurrence.

The results of such investigations can then form the basis for compliance with 49 CFR 192.605(b)(8), which requires a natural gas system operator to periodically review its operating manual to determine the effectiveness and adequacy of procedures and to modify procedures where deficiencies are found.

Turning to the fact that these A Form documents are missing and, most critically, to PG&E's actions after it learned that the records could not be located despite a diligent search, we find that fines are required to deter a recurrence. The evidentiary record shows that PG&E, via its relatively new Corrective Action Program identified a situation that needed correction - 12 years of missing A Forms - and set about a logical action plan, conducting an extensive search.

Upon completing such a search without finding the missing A Forms, the record shows no further actions. PG&E's post-search conduct failed to complete the analysis of the implications of the permanently missing A Forms as well as devising any means of mitigating these impacts. Additional corrective action may or may not have been possible, but an explicit assessment and a reasoned determination was necessary to comprehensively address the issue raised in the initial request for corrective action.

We find that PG&E violated 49 CFR §§ 192.617 and 192.605(b)(8) across its natural gas system by its failure to promptly and comprehensively assess the consequences of the 12 years of missing A Forms in the De Anza division incident. We find that PG&E failed to comply with 49 CFR § 192.617 in that PG&E did not properly analyze the effects of the missing records and determine whether mitigation measures should be adopted and otherwise take the needed steps to minimize the possibility of recurrence.

For purposes of tabulating the fine for failure to comply with 49 CFR §§ 192.617 and 192.605(b)(8), we find that this violation is a continuing violation. As set forth below, for purposes of Pub. Util. Code § 2108, we find that the violations began on January 1, 1979, the earliest date the records could be missing, and continued until January 1, 2011, when PG&E appears to have realized the records were missing. Pursuant to Pub. Util. Code § 2107, the range of fines is a minimum of \$6,026,000 based on \$500 per day to a maximum of \$142,416,000 with a fine of \$50,000 per day.

We find that the daily fine amount should be towards the lower end of the range from \$500 to \$50,000 because the severity of the harm from this violation is limited. Similarly, SED's fine amount recommendation of \$10,786,000 reflects a

daily fine of \$834.95. We conclude that a fine of \$1,000 per day is consistent with our standards for assessing fines and we adopt this daily amount.

Therefore, we find that PG&E’s failure to analyze its system and take corrective action after discovering that the De Anza division 1979 to 1991 A Form records were missing requires the imposition of a fine to deter future such conduct. For purposes of tabulating the fine for failure to comply with 49 CFR §§ 192.617 and 192.605(b)(8) with regard to the De Anza records, the violations began on January 1, 1979, the earliest date the records could be missing, and continued until January 1, 2011. The per-day fine of \$1,000 is in the lower end of that range, which is consistent with the severity of the harm and SED’s recommendation. We conclude that PG&E should pay a fine of \$1,000 per day for the 12,052 days from when the earliest time De Anza records could have been missing until PG&E discovered that the records were missing. This results in a fine of \$12,052,000.

Violation	Begin Date	End Date	Days 1951-1993	Days 1994 - 2011	Days 2012 to present
Missing DeAnza Division Leak Repair Records	January 1, 1979 through Dec 31, 1991	December 31, 2011 (known to be lost “for a few years” in 2014)	5,478	6,573	0
			\$10,956,000	\$131,460,000	0
TOTAL STATUTORY MAXIMUM					\$142,416,000
Statutory Minimum	January 1, 1979	December 31, 2011	Days = 12,052 @ \$500 per day		
TOTAL STATUTORY MINIMUM					\$ 6,026,000

SED Recommendation ³²	\$10,786,000
Adopted Fine - \$1,000 per day	\$12,052,000

We next turn to SED’s recommendation that we impose a fine of \$8.6 million for violation of § 451 for failing to disclose known facts about the missing DeAnza records. SED contended that PG&E should have disclosed the missing A Forms in the report ordered by the Commission when initiating this investigation and that PG&E’s failure to do so “obstructed the Commission’s ability to help PG&E improve the safety of its system.”³³

PG&E explained that: (1) the information in the A Forms is not missing as it had been recorded in PG&E’s electronic data base, (2) there is no causal connection between the missing A Forms and the unmapped plastic insert, and (3) the missing A Forms were not relevant to the Commission’s direction in I.1411-008.

We find the SED has failed to meet its burden of proving both the facts and the law underlying the allegation that PG&E’s conduct obstructed the Commission’s regulatory abilities. In the OII, the Commission directed PG&E to file and serve a report to “contest any facts asserted in the SED Incident Investigation Reports.” Specifically, the Commission stated:

PG&E is therefore directed to appear and provide a report, within 30 days of the issuance of this OII, to identify all reasons of law and fact known to PG&E to support the possibility that the company has committed no violation of law with respect to its gas distribution

³² SED Opening Brief 80 – 81. (SED’s fine recommendation is based on two components, failing to maintain accurate records and failure to timely investigate the missing records)

³³ SED Opening Brief at 83 – 4.

recordkeeping. Thus, PG&E is directed to file and serve a report on all known parties, which responds to the following directives:

1. List each factual contention stated, and conclusion reached, by the SED Incident Investigation Reports, regarding PG&E's recordkeeping, that PG&E contends is incorrect, and provide support for PG&E's position.
2. What explanation does PG&E offer for each recordkeeping failure claimed in the SED incident investigation reports?
3. What corrective actions has PG&E already taken in response to the recordkeeping failures identified in the SED incident investigation reports?
4. Provide the names (and titles if employee or agent) of all witnesses to the responses and information in the PG&E report. Provide the name of each such witness with respect to specified portions of the PG&E report.³⁴

The purpose of PG&E's report, as directed by the Commission, was to obtain "all reasons of law and fact known to PG&E to support the possibility that the company has committed no violation of law with respect to its gas distribution recordkeeping." SED does not explain how the fact that A Forms were missing for the DeAnza Division from 1979 to 1991 falls within the Commission's directive. We note as well that SED did obtain sufficient information from PG&E to illuminate the issue of the missing A Forms well in advance of the due date for SED's testimony. Accordingly, SED has not shown a clear violation of the Commission's directive to PG&E and SED, in fact, received the information regarding the missing A forms in sufficient time to prepare the issue for litigation. Therefore, we conclude that no additional penalties for

³⁴ OII at 9.

failure to produce the missing DeAnza division A Form documents are necessary.

4.4.1.4. Failure of PG&E to Adequately Respond to Local Officials

As set forth above, a house located in Carmel-by-the-Sea was destroyed by a natural gas ignition and explosion on March 3, 2014. The Mayor of the City of Carmel-by-the-Sea testified that local officials received numerous communications from “frightened citizens after the explosion” and that many citizens attended City Council meetings expressing “fear of what dangers lie below in PG&E’s system of underground pipes.”³⁵ The Mayor expressed his particular dissatisfaction with the behavior of PG&E’s then-President, Chris Johns, who cancelled an in-person meeting with less than 24 hours’ notice. PG&E representatives instead demanded that the Mayor present written requests for PG&E’s consideration. The Mayor concluded that his efforts to meet with PG&E executives to express his community’s concerns have been “rebuffed and ignored.”³⁶

The very presence of the City of Carmel-by-the-Sea as a party to this proceeding demonstrates the enduring nature of the City’s dissatisfaction with PG&E’s, and especially Mr. Johns’s conduct after the house explosion.

The City recommends that the Commission impose extensive fines on PG&E for the explosion incident pursuant to the federal recordkeeping requirement, 49 CFR § 192.605(b)(3), and Pub. Util. Code § 451. As set forth in § 451, PG&E is obligated to provide its customers with “adequate, efficient, just

³⁵ Hearing Exh. 44 at 5.

³⁶ *Id.*

and reasonable service” necessary to “promote the safety, health, comfort, and convenience of its patrons, employees, and the public.”

We address the specific incident elsewhere in today’s decision, and here focus on the critical role of local elected officials in communications with public utilities generally, but most acutely as regards dangerous facilities located in the officials’ jurisdiction and often in public right-of-way. As was the case here, concerned residents after experiencing an unexpected and frightening event turn to their local officials to represent them in resolving the new-found threat. Being responsive and cooperative to inquiries from local officials, especially after a utility-caused explosion, is an essential component of “adequate, efficient, just and reasonable service” necessary to “promote the safety, health, comfort, and convenience of its patrons, employees, and the public.”

Rebuffing and ignoring requests from the highest ranking local official, and abruptly cancelling a much-anticipated executive meeting, is not adequate service that promotes the safety, health, comfort and convenience of PG&E’s customers. We find that PG&E violated the requirements of § 451 by its lack of communication with and respect for the City’s elected officials after the March 3, 2014 explosion. This is a serious violation because it occurred after a safety failure in the City. We, therefore, assess the maximum fine of \$50,000 available pursuant to Pub. Util. Code § 2107. Mr. Johns is no longer an officer of PG&E. His conduct becomes the conduct of PG&E pursuant to Pub. Util. Code § 2109. Were he still an officer, we would consider imposing the fine directly on Mr. Johns to emphasize the importance of public utility leadership demonstrating its commitment to customers, especially following safety lapses.

4.4.1.5. Other Recordkeeping and Mapping Allegations

SED stated that PG&E has failed to accurately map service stubs – distribution gas lines that were either never placed in service or that have been retired from service – and that PG&E’s maps and records do not include certain facilities, i.e. unmapped, as well as do not accurately reflect actual facilities, i.e., mis-mapped facilities. SED proposed fines based on the number of days between incidents involving the same type of record and “compounded” the fines monthly.³⁷ SED recommended that PG&E take two specific steps to address unmapped or incorrectly mapped stubs: (1) examine the costs and benefits of a systematic identification and correction effort for stubs, and (2) re-examine the wisdom of more aggressively eliminating existing stubs.³⁸

We begin with SED’s recommendation for fines. As set forth above, PG&E’s overall system mapping accuracy as measured by locate and mark failures, i.e., accidental dig-ins, is well over 99%. The specific incidents brought forward by SED are addressed in the next section of today’s decision. Here, we address SED’s recommendations for PG&E to make systemic changes to the way it handles stubs.

PG&E explained that its Distribution Integrity Management Program and Corrective Action Program identify and evaluate risk for the purpose of mitigating that risk, including benchmarking analysis to identify industry best practices in addressing unmapped stubs.³⁹ On the issue of service stubs, PG&E

³⁷ SED Opening Brief at 82 – 83.

³⁸ Hearing Exh. 1 at 75.

³⁹ Hearing Exh. 4 at 6-14 to 6-16.

noted that its records show 71,131 stubs with the recently implemented electronic records system, GD GIS. PG&E also agreed with SED's testimony that stub services should be tracked, monitored, and evaluated for continuing usefulness, and removed when no longer useful. PG&E adopted just such a program in 2012.⁴⁰

As set forth above, PG&E agrees with SED's recommendations. PG&E is and has been implementing the recommended programs. We expect SED will continue to monitor PG&E's implementation of these programs to ensure that the stated objectives are accomplished.

4.4.2. Assessing Per Incident Fines

The Commission listed six incidents where damage occurred to the PG&E gas distribution system in its OII. SED provided details on more incidents in its testimony. A total of 13 operational incidents, plus four violations found during inspections, comprise the list of incidents for which SED recommends that the Commission impose fines. Each of these incidents is listed below with a summary of the uncontested facts and SED's recommended fine.

As discussed above, the systemic issues are those with broad impact and which will require equally broad remedies to address any violations. As analyzed and with the fines imposed above, we find that allegations of poor management of plastic insert mapping errors and the missing DeAnza Division leak repair records from 1979 to 1991 are properly viewed as allegations of systemic violations.

⁴⁰ Hearing Exh. 4 at 5 -7, citing Hearing Exh. 7 at W091.001 - 015

In contrast, incidents are defined as isolated violations where PG&E's conduct represented a deviation from general compliance. The proper fine that should be assigned to an isolated violation in a generally compliant program, however, is very different from the fine level needed to bring necessary changes to a noncompliant system. SED's allegations of numerous incidents of mapping deficiencies and resultant marking errors occur in the context of PG&E locating and marking its facilities in hundreds of thousands places each year. PG&E witnesses testified, and SED did not dispute, that PG&E has an accuracy rate for locating and marking its facilities that is well over 99%. A system that works over 99% of the time is not a *system* in need of improvement. The isolated failures, however, must draw consequences to create incentives for constant improvement in execution. Accordingly, we have reviewed the incidents listed below to develop sanctions tailored to the facts presented.

SED's recommended fines vary significantly for substantially similar conduct. For example, SED recommends a fine of \$20,000 for the Roseville incident where a contractor damaged a gas distribution main resulting in a gas release and evacuation of 6 buildings. In comparison, SED also proposed a fine of over \$5 million for the Morgan Hill incident where gas was released, service to one customer interrupted and two structures evacuated.⁴¹

SED stated that it "compounded" violations on a daily, weekly, monthly or number of customers impacted basis to arrive at its final fine tabulation.⁴² SED

⁴¹ Articulating and applying a reasoned basis for assessing fines on the enumerated incidents is the primary reason our total fine amount is substantially less than SED's total recommended fine.

⁴² SED Opening Brief at 76 - 79.

references Pub. Util. Code § 2108 for this authority. However, that code section states: “each 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 continuing violation each day’s continuance thereof shall be a separate and distinct offense.”

In D.15-04-022, the Commission found that: “In determining the number of violations, Pub. Util. Code § 2108 states that for a continuing violation, each day would be considered a separate and distinct offense.”⁴³ In Appendix B to that decision, the Commission carefully tabulated the days in violation of each rule separately for each historic time period based on the then-applicable maximum fine to determine a total number of violations. SED stated that it used a daily tabulation of violations, as required by § 2108, for “certain critical failures” but used a weekly or monthly basis for other tabulations “premised on a consideration of the totality of the circumstances, including PG&E’s actions in mitigation.”⁴⁴ No further analysis is presented.

SED also contended that PG&E violated California Government Code § 4216.3, which establishes the “one call” locate and mark program. That code section does not require the operator to maintain accurate records and only requires the operator to mark locations “to the extent and degree of accuracy that the information is available:”

§ 4216.3.(a)(1) Any operator of a subsurface installation who receives timely notification of any proposed excavation work in accordance

⁴³ D.15-04-022 at 40.

⁴⁴ SED Opening Brief at 76.

with Section 4216.2 shall, within two working days of that notification, excluding weekends and holidays, or before the start of the excavation work, whichever is later, or at a later time mutually agreeable to the operator and the excavator, locate and field mark the approximate location and, if known, the number of subsurface installations that may be affected by the excavation to the extent and degree of accuracy that the information is available either in the records of the operator or as determined through the use of standard locating techniques other than excavating, otherwise advise the person who contacted the center of the location of the operator's subsurface installations that may be affected by the excavation, or advise the person that the operator does not operate any subsurface installations that would be affected by the proposed excavation.⁴⁵

The regulations of the PHMSA applicable to natural gas pipeline operation are found in Part 192 of volume 49 of the Code of Federal Regulations. Subpart L applies to operations. The first section of the subpart is entitled "General provisions" and includes at § 192.603(b) the following requirement:

(b) Each operator shall keep records necessary to administer the procedures established under § 192.605.

The next section is § 192.605 with the title: "Procedural Manual for Operations, Maintenance, and Emergencies." The first part of that section requires each operator to prepare and follow a manual of written procedures for operations and maintenance. The next part sets out the requirements for the manual. Among those requirements are procedures for the following:

§ 192.605(b)(3): Making construction records, maps, and operating history available to appropriate operating personnel.

In the incidents listed below, PG&E failed to have the records necessary to operate and maintain its natural gas distribution system as required by

⁴⁵ Government Code § 4216.3(a)(1) emphasis added.

§ 192.603(b) because PG&E did not have complete and accurate records of its distribution pipeline. Complete and accurate records are necessary to safely operate and maintain the system. In each of the incidents listed below, PG&E's gas distribution system records were erroneous or incomplete in some respect. Each of these erroneous or incomplete records is a violation of § 192.603(b).

Similarly, PG&E violated § 192.605(b)(3) with each incident because it was unable to provide its operating personnel with accurate records, maps, and operating history.

Finally, each incident of PG&E failing to have complete and accurate records to make available to on-site operating personnel resulted in this public utility also failing to operate its natural gas distribution system in such a way as to "promote the safety, health, comfort, and convenience of its patrons, employees, and the public" as is required by § 451.

For example, in Roseville, on October 21, 2010, a contractor struck and damaged a 2-inch plastic distribution main that incorrectly was shown as being in a joint trench when it was actually located in a separate trench. The records were inaccurate in violation of 42 CFR § 192.603(b), PG&E failed to provide its operating personnel the accurate records needed in violation of 42 CFR § 192.605(b)(3), finally resulting in unsafe public utility operations which violated § 451 as well. All totaled, there are three distinct violations for each incident which could be assessed against PG&E.

We find that there are mitigating and aggravating factors that should be reflected in our decision regarding the number of violations for each incident. Most importantly, none of these events involved human death or injury or resulted in a fire. The harm is limited to environmental degradation from gas releases and customer inconvenience.

The fines to be imposed on these similar incidents should be consistent and graduated based on relative harm imposed and the sophistication of the excavator. PG&E's crews should be held to a higher standard because they are experts in natural gas systems. Inconvenience and service interruption to customers reflects a greater harm than just release of gas to the atmosphere.

Therefore, we conclude that the following principles should be applied to determining the fine for each incident:

- (1) if only gas release and PG&E not the excavator, one violation and one maximum applicable fine;
- (2) if only gas release and PG&E the excavator, one violation and additional maximum applicable fine;
- (3) if customer evacuations, another violation and maximum applicable fine.

The principles are applied to each incident listed below and the resulting fine set forth in the column entitled Presiding Officer Determination. The applicable maximum fine set forth in § 2107 was \$20,000 from 1994 through 2011, and changed to \$50,000 in 2012.

The Milpitas 1 incident has an unusual factual twist in that the records were correct that a valve was supposed to be open, but the conditions in the field were not consistent with the records in that the valve was closed. Moreover, the technicians failed to monitor the pressure gauges which should have alerted them to the anomaly. Due to the multiple levels of failures, we tabulate this fine differently. On October 10, 2012, a PG&E crew relied on an inaccurate plat map showing a non-emergency distribution main valve was "open" when it was actually "closed" and then the PG&E crew did not monitor pressure gauges which were showing pressures inconsistent with engineering model. This incident is one of operational management failure - the valve was supposed to

be open and the crew should have monitored the pressure gauges to detect the anomaly – as well as recordkeeping in that the records were not consistent with the actual conditions in the field.

As a result of the incident, gas service to 987 customers was interrupted. We find that each service interruption constitutes a separate violation of § 451 because PG&E owed a duty of safe service to each customer and failed to deliver safe service due to its records and operational actions, necessitating a service interruption. As there were no injuries or documented economic losses, the appropriate amount per incident should be closer to the lower end of the statutory range of \$500 to \$50,000 in effect on the date of the incident. SED recommends a fine of \$2,000 per violation, which we find reasonable. Therefore, we conclude that PG&E should pay a fine of \$1,974,000 for this incident.

Incident Description	Harm Caused	Presiding Officer Determination
Castro Valley, September 17, 2010, contractor dug into 1-inch plastic gas service line, unmapped	Gas released, service interruption to four customers	\$40,000 2 violations @ \$20,000 each
Morgan Hill, June 21, 2012, contractor struck and damaged unmarked ¾ inch steel gas line	Gas released, one customer service interruption, two structures evacuated as precaution	\$100,000 2 violations @ \$50,000 each

<p>Milpitas 1, October 10, 2012, PG&E crew relied on inaccurate plat map showing non-emergency distribution main valve was “open” when it was actually “closed” PG&E crew did not monitor pressure gauges which were showing pressures inconsistent with engineering model</p>	<p>Service outage for 987 customers</p>	<p>Not eligible for “damaged pipe” rule.</p> <p>Not due to poor recordkeeping, this incident was the result of poor operational management, and resulted in large service outage.</p> <p>Find that each service interruption is a separate violation.</p>
<p>Milpitas 2, March 4, 2013, contractor dug into mismarked 2 inch plastic distribution main</p>	<p>Gas release</p>	<p>\$50,000</p> <p>1 violation @ \$50,000</p>
<p>Mountain View, July 30, 2013, PG&E crew welded tap fitting onto a 1 ¼ inch steel service line that unknowingly contained a plastic insert</p>	<p>Gas release</p>	<p>\$100,000</p> <p>2 violations @ \$50,000 each.</p> <p>(Also part of failure to minimize recurrence fine)</p>
<p>Carmel, March 3, 2014, PG&E crew welded a tapping tee into a 2 inch steel distribution main with unmapped plastic insert, natural gas migrated into the unoccupied residence, collected and exploded hours later.</p>	<p>Residence destroyed, value = \$302,000</p>	<p>\$100,000</p> <p>2 violations @ \$50,000 each</p> <p>Citation for \$10.8 million already paid to General Fund.</p> <p>(also part of failure to minimize recurrence fine)</p>

San Ramon, August 12, 2009, contractor damaged unmapped and unmarked 2-inch service to restaurant	Gas released, service to business interrupted	\$40,000 2 violations @ \$20,000 each
Kentfield, contractor struck and damaged unmapped and unmarked 2-inch plastic main lacking a tracer wire	Gas release	\$20,000 1 violation @ \$20,000 each
Sacramento, October 31, 2011, contractor struck and damaged 1 ¼ inch plastic service line, marking was faulty due to loss of signal	Gas release	\$20,000 1 violation @ \$20,000 each
Fresno, September 24, 2014 PG&E crew struck and damaged a mismapped and mismarked 1-inch plastic gas service line.	Gas release	\$100,000 2 violations @ \$20,000 each
San Jose II, January 20, 2015, contractor hit and damaged 1 ¼ inch steel stub extending from 4inch main. Stub was not mapped or marked, but main was.	Gas release, major traffic diversion and evacuation of 12 businesses	\$100,000 2 violations @ \$50,000 each
Colusa, March 19, 2009 PG&E crew struck 2-inch steel gas main which was unmarked off of marked 3-inch main.	Gas release	\$40,000 2 violations @ \$20,000 each
Roseville, October 21, 2010, contractor struck and damaged 2-inch plastic gas distribution main, incorrectly marked by PG&E	Gas release, evacuation of 6 buildings	\$40,000 2 violations @ \$20,000 each
SED Inspection San Francisco, Leak 1, plastic insert installed in December 2013 not reflected in current map	noncompliance	Aggravating factor failure to minimize recurrence fine.

SED inspection of San Francisco, Leak 2, found plastic insert installed in May 2013 not reflected in current map	noncompliance	Aggravating factor failure to minimize recurrence fine.
SED inspection of San Jose Leak 1 found plastic insert installed in October 2013 mapped to wrong address	noncompliance	Aggravating factor failure to minimize recurrence fine.
SED inspection of San Jose Leak 2 found plastic insert installed in July 2014 mapped to wrong address	noncompliance	Aggravating factor failure to minimize recurrence fine..
	TOTAL	\$750,000

4.5. Other Remedial Measures

As shown in Attachment A, the Commission has imposed significant remedial recordkeeping requirements on PG&E as a result of the gas transmission recordkeeping Investigation. TURN recommends extending these requirements to the distribution system as discussed above. SED has proposed other reporting requirements. PG&E argued that it is already underway with many corrective actions directed at the objectives of the new report suggested by SED and that some of the SED’s proposals are infeasible.⁴⁶

We find that a comprehensive assessment of the remedial proposals is needed to develop a cost-effective and feasible compliance plan. Such a plan must involve all interested parties and have a shared view of the need for safe operation of the natural gas distribution system. The plan could also be useful for general rate cases to ensure that safety is prominently addressed.

⁴⁶ PG&E Reply Brief at 51.

Therefore, we conclude the parties to this proceeding, and such other parties as may be interested, should use a meet and confer process to evaluate existing remedial measures for recordkeeping and develop such additional measures as may be required.

PG&E shall convene, support, and report on a meet and confer process to consider and develop additional remedial measures necessary to address the issues identified in today's decision. The objective of this process will be a comprehensive compliance plan that includes all feasible and cost-effective measures necessary to improve PG&E's natural gas distribution system recordkeeping. The participants shall begin their review with Exhibit E to D.15-04-024 to evaluate those remedial measures to determine whether more or different requirements are needed for the gas distribution system. All parties to this proceeding shall be invited to participate as well as all parties to the most recent general rate case and I.11-02-016. SED shall participate and monitor this process. No later than 120 days after the effective date of this order, PG&E shall file and serve its initial compliance plan. The compliance plan shall include statements from any party disagreeing with any aspect of the plan, including any omission, along with alternative recommendations and supporting rationale. Parties may request that this proceeding be reopened if needed to ensure proper implementation.

4.6. Conclusion

For the violations of federal and state law and regulations set forth above, PG&E shall pay a total fine of \$ 25,626,000.

Violation	Amount of Fine
Failure to Minimize Possibility of Recurrence – Plastic Inserts	\$10,800,000
Failure to Analyze and Minimize Possibility of Recurrence – Missing DeAnza Records	\$12,052,000
Failure to Provide Safe and Reliable Service – Milpitas 1	\$ 1,974,000
Specific Incidents	\$ 750,000
Service failure to City of Carmel-by-the Sea	\$ 50,000
TOTAL	\$25,626,000

5. Appeal of the Presiding Officer’s Decision

SED and the City of Carmel-by-the-Sea filed appeals of the Presiding Officer’s Decision on July 1, 2016. PG&E filed its response to both appeals on July 18, 2016. The grounds on which each party contended that the Presiding Officer Decision was unlawful or erroneous are analyzed below. Where noted in today’s decision, the Presiding Officer’s Decision has been revised in response to the appeals. In all other respects, the appeals are denied.

In today’s decision, we add the omitted \$50,000 Carmel fine to the total fine and revise the De Anza missing records per-day fine from \$834.95 to \$1,000 per day. The additional De Anza amount of \$1,266,000 plus \$50,000 brings the total fine to \$25,626,000, as compared to the total fine of \$24,310,000 in the Presiding Officer’s decision.

5.1. Corrected Sum of Fine Assessed

SED⁴⁷ contends and PG&E⁴⁸ agrees that the sum of fines assessed on page 55 of the Presiding Officer’s Decision incorrectly omits the \$50,000 fine for

⁴⁷ SED Appeal at 3.

⁴⁸ PG&E Response at 3.

PG&E's service failures to City of Carmel-by-the-Sea. This error has been corrected in today's decision.

5.2. Total Fine Amount and Carmel Incident

SED argued that the Presiding Officer Decision erred in setting the fine too low and that the fine for the Carmel incident should be increased by \$20.73 million.⁴⁹ As set forth above, the Commission had previously upheld a citation of \$10.85 million for that incident and SED did not dispute the Presiding Officer's Decision holding that an additional fine of \$10.8 million should be assessed against PG&E for failing to prevent recurrences of leaks caused by unmapped plastic inserts (the cause of the Carmel explosion).

SED argued the Proposed Decision erred in adopting a fine of only \$21.65 million and an additional fine of \$20.73 million should be imposed. PG&E stated that a total fine of \$42.38 million would be "disproportionate to the harm that resulted" and "unprecedented."⁵⁰

SED cited to no Commission precedent with a fine of this magnitude for similar violations nor aggravating circumstances that would justify such a departure from Commission precedent. SED has shown no error or unlawful determination in the Presiding Officer's Decision.

5.3. Maximum Allowable Operating Pressure Records

SED reiterated its argument that 49 CFR section 192.619 required that PG&E possess actual 1965 to 1970 operating records for all distribution systems subject to this provision and contended that PG&E admitted its violation. PG&E

⁴⁹ SED Appeal at 55.

⁵⁰ PG&E Response at 29.

denied such an admission and demonstrated that it has a longstanding alternative method for setting MAOP where operating records are not available.⁵¹ SED has shown no error in the Presiding Officer's Decision on this issue.

5.4. De Anza Per-Day Fine

The City of Carmel-by-the-Sea argued that the Presiding Officer erred in imposing a fine of \$834.95 for each day the De Anza records were missing.⁵² Today's decision finds that a daily fine of \$1,000 is consistent with the severity of the offense and SED's recommendation.

Accordingly, the total fine for the missing De Anza records is \$12,052,000.

5.5. Per Incident Fines and Additional Incidents

SED argued that the maximum fine for each incident should be imposed and that additional incidents should be included.⁵³ PG&E responded in opposition that the Commission has discretion to tailor the fines to specific facts of each violation and that additional incidents are not within the scope of this proceeding.

The City of Carmel-by-the-Sea also contended that the Commission was without discretion to decide, based on the specific facts of each violation, whether to apply Public Utilities Code Section 2108 to uncorrected violations.⁵⁴

⁵¹ *Id.* at 35.

⁵² City of Carmel-by-the-Sea's Appeal at 8 - 9.

⁵³ SEC Appeal at 52 and 60 - 62.

⁵⁴ City of Carmel-by-the-Sea Appeal at 4 - 7.

In its Appeal, SED acknowledged that the Commission has the discretion to decline to impose daily fines pursuant to § 2108.⁵⁵ PG&E agreed with SED and cited to D.15-04-024.⁵⁶

We find that the additional incidents were outside the scope of this proceeding and that the Commission has substantial discretion to tabulate and impose fines based on the specific facts of each violation. SED and the City of Carmel-by-the-Sea have demonstrated no error in the Presiding Officer's Decision.⁵⁷

5.6. City of Carmel-by-the-Sea's Other Requests

The City requested reimbursement from PG&E for its expenses. The Commission's policy choice to decline to use its equitable powers to order PG&E to reimburse governmental entities for their litigation costs was set forth in D.15-04-024 at 168-170. The City has presented no reason to depart from that policy choice.

The City also recommended linking executive compensation to safety performance; a similar proposal was also examined and found duplicative or unsupported in D.15-04-024 at 167. Finally, the City of Carmel-by-the-Sea sought appointment of an independent monitor. That proposal was also considered in D.15-04-024 at 155- 60, where the Commission authorized another \$30 million in reimbursement for experts for SED in addition to the \$15 million awarded in

⁵⁵ SED Appeal at 22.

⁵⁶ PG&E Response at 28.

⁵⁷ This determination also disposes of SED's arguments on increased per incident fines and that the DeAnza records fine should be tabulated with different start and end dates.

Rulemaking 11-02-019, and otherwise denied the requested independent monitor.

Finally, the parties agree that the fines ordered in today's decision may not be included in regulated revenue requirement nor recovery sought from ratepayers in any manner.⁵⁸

The City of Carmel-by-the-Sea brought the unique perspectives of local government and first responders to this proceeding. The efforts of the City to bring forth these perspectives added greatly to the development of a complete evidentiary record and assisted the Commission in discharging its duties.

6. Assignment of Proceeding

Carla J. Peterman is the assigned Commissioner and Maribeth A. Bushey is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. The Commission opened this proceeding to investigate six listed incidents of damage to PG&E's natural gas distribution system as well as to examine whether PG&E's operations of its natural gas distribution system was consistent with federal and state law and regulations.

2. On May 8, 2015, PG&E circulated its Statement of Facts regarding the listed incidents.

3. There were no disputed issues of material fact with regard to the six listed incidents.

⁵⁸ City of Carmel-by-the-Sea Appeal at 9 – 10; PG&E response at 38.

4. The Commission's SED, with expert consultants, investigated PG&E's natural gas distribution system operations and issued a report on September 30, 2015. SED recommended fines of \$111.926 million on February 26, 2016.

5. The City of Carmel-by-the-Sea submitted testimony of its Mayor and Chief of Police regarding the impact on the City and its residents following the explosion of the residence in March of 2014.

6. TURN submitted testimony regarding remedial safety improvements that should be ordered by the Commission, as well as the impact of recent significant rate increases on PG&E's natural gas customers.

7. The Commission has previously imposed substantial sanctions on PG&E for deficiencies in its record-keeping for its natural gas transmission system.

8. PG&E's conduct after detecting the missing DeAnza records was not a reasonable means to identify, analyze and resolve the missing records.

9. The violations found in today's decision show poor recordkeeping leading to damage of PG&E's natural gas distribution system facilities, with limited actual harm but the serious potential for great harm.

10. There is no acceptable level of failure to comply with applicable law and regulations; each failure is a violation.

11. PG&E's conduct after discovering in the 1970's that it was missing needed distribution system highest operating pressure paper records from 1965 to 1970 included promptly admitting that the records were missing, diligently albeit unsuccessfully searching for the missing records, analyzing and obtaining best available replacement records, and openly disclosing the replacement records to regulators.

12. PG&E failed to analyze its system and take corrective action after the July 30, 2013 Mountain View plastic tap incident.

13. PG&E conducted a diligent search for the missing DeAnza division 1979 to 1991 A Form records that was unsuccessful, but took no further action to consider the implications of the missing records or to devise and implement any corrective measures.

14. PG&E failed to analyze its system and take corrective action after discovering that the DeAnza division 1979 to 1991 A Form records were missing.

15. PG&E was not responsive and cooperative to inquiries from local officials in the City of Carmel-by-the-Sea and did not provide “adequate, efficient, just and reasonable service” necessary to “promote the safety, health, comfort, and convenience of its patrons, employees, and the public.”

16. PG&E agrees with and is implementing SED’s recommendations for a long-term program to address service stubs in PG&E’s distribution system.

17. SED analyzed 13 incidents of damage to PG&E’s natural gas distribution system; each instance involved a record-keeping error leading to the system damage. The Milpitas October 10, 2012, incident is not factually similar to the other 12 instances and should be assessed a fine based on the number of violations of § 451 by interrupting service to a customer because PG&E failed to have its system operating in conformance with its plat map and failed to monitor pressure gauges for anomalous readings during the work.

18. The fines to be imposed for the 12 similar incidents should be consistent and graduated based on relative harm imposed and the sophistication of the excavator. PG&E’s crews should be held to a higher standard because they are experts in natural gas systems. Inconvenience and service interruption to customers reflects a greater harm than just release of gas to the atmosphere.

19. The following principles should be applied to determining the fine for each of the 12 similar incidents: (1) if only gas release and PG&E not the excavator,

one maximum applicable fine, (2) if only gas release and PG&E the excavator, one additional one maximum applicable fine and, (3) if customer evacuations, another one maximum applicable fine.

20. The Commission imposed substantial remedies on PG&E designed to improve its record-keeping as a result of I.11-02-016.

Conclusions of Law

1. PG&E has the duty to furnish and maintain safe equipment and facilities to its natural gas customers and the public.

2. SED bears the burden of proof in this investigatory proceeding.

3. The standard of proof is a preponderance of the evidence.

4. There are no disputed issues of material fact.

5. The Commission has adopted standards for imposing fines for violations of law or regulations.

6. PG&E's conduct after detecting the missing De Anza records requires a significant fine to deter future such conduct.

7. The Commission must tailor its fines to the specific facts of violations.

8. Fines for systemic failures must be significant to accomplish broad changes across PG&E's operations.

9. Fines for isolated compliance deviations in an otherwise compliant system are necessary, should represent a meaningful consequence, and should be graduated based on the specific circumstances.

10. The most directly applicable precedent is Commission Resolution ALJ-277 where the Commission upheld a \$16,760,000 fine for poor recordkeeping leading to failures to leak survey nearly 14 miles of PG&E's natural gas distribution system facilities because there was limited actual harm but the serious potential for great harm.

11. The Commission's standards for assessing fines requires that the Commission consider the severity of the offense; the conduct of the utility before, during, and after the offense; the financial resources of the utility; the totality of the circumstances in furtherance of the public interest; and the amount of the fine in relationship to prior Commission decisions.

12. PG&E's conduct after discovering in the 1970's that it was missing needed distribution system highest operating pressure paper records from 1965 to 1970 included promptly admitting that the records were missing, diligently albeit unsuccessfully searching for the missing records, analyzing and obtaining best available replacement records, and openly disclosing the replacement records to regulators; PG&E's conduct does not require the imposition of fines to deter future such conduct.

13. PG&E failed to analyze its system and take corrective action after the July 30, 2013 Mountain View plastic tap incident in violation of 49 CFR §§ 192.617 and 192.605(b)(8); the violation began immediately following the Mountain View incident on July 30, 2013 until the date of the Carmel incident on March 3, 2014, when PG&E began instituting changes to its operating procedures to better detect unmapped plastic inserts. Each day of this continuing violation is a separate offense pursuant to § 2108.

14. PG&E should be assessed the maximum fine due to the potential for human injury and property damage for its failure to analyze its system and take corrective action after the July 30, 2013 Mountain View plastic tap incident. The 216 days of violation multiplied by the applicable statutory maximum amount of \$50,000 yields a total fine payable to the General Fund of \$10, 800,000.

15. PG&E's failure to analyze its system and take corrective action after the July 30, 2013 Mountain View plastic tap incident requires the imposition of a fine to deter future such conduct.

16. In violation of 49 CFR §§ 192.617 and 192.605(b)(8), PG&E failed to analyze its system and take corrective action after discovering that the DeAnza Division 1979 to 1991 A Form records were missing.

17. PG&E's failure to analyze its system and take corrective action after discovering that the De Anza Division 1979 to 1991 A Form records were missing requires the imposition of a fine to deter future such conduct.

18. For purposes of tabulating the fine for failure to comply with 49 CFR §§ 192.617 and 192.605(b)(8) with regard to the DeAnza records, the violations began on January 1, 1979, the earliest date the records could be missing, and continued until January 1, 2011, when PG&E appears to have realized the records were missing.

19. For purposes of tabulating the fine for failure to comply with 49 CFR §§ 192.617 and 192.605(b)(8) with regard to the DeAnza records, pursuant to Pub. Util. Code § 2107, the range of fines is a minimum of \$6,026,000 to a maximum of \$142,416,000.

20. For purposes of setting the fine for failure to comply with 49 CFR §§ 192.617 and 192.605(b)(8) with regard to the De Anza records, we should adopt a daily fine of \$1,000, which is closer to the lower end of the authorized range.

21. PG&E failed to comply with § 451 with regard to local officials in the City of Carmel-by-the-Sea, and should be assessed the maximum fine of \$50,000 for this violation.

22. The following principles should be applied to determining the amount of the fine for each of the 12 similar incidents: (1) if only gas release and PG&E not the excavator, one maximum applicable fine; (2) if only gas release and PG&E the excavator, one additional one maximum applicable fine; and (3) if customer evacuations, another one maximum applicable fine. These principles have been applied to each instance as set forth in the table in the body of today's decision. These fines totaling \$750,000 are consistent with the Commission's standards for the assessment of fines and should be adopted.

23. The Milpitas October 10, 2012, incident is not factually similar to the other 12 instances and should be assessed a fine based on the number of violations of § 451 by interrupting service to a customer; PG&E's conduct resulted in service interruptions to 987 customers.

24. Pursuant to § 2107, the Commission is authorized to impose a per-violation fine of between \$500 and \$50,000. The per-violation amount for the Milpitas incident of October 10, 2012 should be nearer the lower end of that range as no economic or physical harm resulted. SED recommended \$2,000 per violation; this recommendation should be adopted and PG&E should be fined \$1,974,000 for the Milpitas incident of October 10, 2012.

25. The Commission imposed substantial remedies on PG&E designed to improve its recordkeeping as a result of I.11-02-016; TURN recommended extending these remedies to PG&E's distribution system. SED also recommended further remedies.

26. The parties should meet and confer to consider and develop additional remedial measures necessary to address the issues identified in today's decision.

27. PG&E should file and serve a compliance filing within 120 days setting forth its initial compliance plan.

28. Parties may request that this proceeding be reopened if needed to ensure proper implementation of the compliance plan.

O R D E R

IT IS ORDERED that:

1. Within 30 days of the effective date of this order Pacific Gas and Electric Company must pay a fine of \$25,626,000 by check or money order payable to the California Public Utilities Commission and mailed or delivered to the Commission's Fiscal Office, 505 Van Ness Avenue, Room 3000, San Francisco, CA 94102. Write on the face of the check or money order "For deposit to the General Fund per Decision 16-08-020."

2. Pacific Gas and Electric Company (PG&E) shall convene, support, and report on a meet and confer process to consider and develop additional remedial measures necessary to address the issues identified in today's decision. The objective of this process will be a comprehensive compliance plan that includes all feasible and cost-effective measures necessary to improve PG&E's natural gas distribution system record-keeping. The participants shall begin their review with Exhibit E to Decision 15-04-024 to evaluate those remedial measures to determine whether more or different requirements are needed for the gas distribution system. All parties to this proceeding shall be invited to participate as well as all parties to the most recent general rate case and Investigation 11-02-016. The Commission's Safety and Enforcement Division shall participate and monitor this process. No later than 120 days after the effective date of this order, PG&E shall file and serve its initial compliance plan.

3. Investigation 14-11-008 is closed.

This order is effective today.

Dated August 18, 2016, at San Francisco, California.

MICHAEL PICKER

President

MICHEL PETER FLORIO

CATHERINE J.K. SANDOVAL

CARLA J. PETERMAN

LIANE M. RANDOLPH

Commissioners

Attachment A

**Adopted Remedies Proposed by CPSD in I.11-02-016
(Recordkeeping OII)**

Attachment A – reproduced from Exhibit E to D.15-04-024

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.

(End of Attachment A)

Attachment B

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