BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Order Instituting Investigation on the Commission's Own Motion into the Operations and Practices of Pacific Gas and Electric Company With Respect to Facilities Records for Its Natural Gas Transmission System Pipelines.	I.11-02-016 (Filed February 24, 2011)

OPENING BRIEF OF THE UTILITY REFORM NETWORK

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I. INTRODUCTION AND SUMMARY

Pursuant to the Administrative Law Judges' Ruling Adopting Revised Schedule and Common Briefing Outlines dated February 4, 2013, The Utility Reform Network ("TURN") submits this opening brief in this Investigation into the conduct and practices of Pacific Gas and Electric Company ("PG&E") related to records of its underground natural gas transmission pipelines.

TURN only occasionally intervenes in Commission enforcement proceedings, but has devoted considerable resources to this Investigation and related Investigations 12-01-007 and 11-11-009, for two reasons.

First, the San Bruno calamity was the worst utility accident ever in California. The ensuing investigations by the National Transportation Safety Board ("NTSB"), the Independent Review Panel, and the CPUC's Consumer Protection and Safety Division ("CPSD") have revealed a disturbing array of unsafe practices, including alarming recordkeeping deficiencies, by PG&E over a long period of time. Accordingly, these are undeniably the most important enforcement proceedings in the Commission's history. To help ensure that such a tragic accident never occurs again, the Commission must thoroughly document each of PG&E's dangerous practices and impose the fines and remedies that PG&E's unsafe conduct warrants.

Second, these enforcement cases will significantly affect the apportionment of financial responsibility for the billions of dollars of improvements PG&E must undertake in order to make its gas transmission system safe. A longstanding principle of Commission ratemaking, reflecting the requirements of California law, is that the Commission will not impose on ratepayers costs that result from a utility's imprudence; shareholders must absorb such costs. In connection with the Pipeline Safety Enhancement Plan ("PSEP") ordered in Decision ("D.") 11-06-017, PG&E

has already begun incurring pipeline safety costs that are estimated to exceed *$11 billion* over the next five to eight years.[1] Although the Commission has tentatively apportioned between ratepayers and shareholders a relatively small portion of those costs in D.12-12-030 (regarding "Phase 1" of PG&E's PSEP), that decision made clear that more Phase 1 costs could be assigned to shareholders based on the outcome of these enforcement cases.[2] And PG&E has not yet presented its estimated $9 billion Phase 2 program. The Commission's conclusions in these enforcement cases will be key to determining how much of PG&E's PSEP costs (including Phase 2, to begin in 2015) is made necessary by PG&E's unsafe practices and thus should be borne by shareholders.[3]

For these reasons, TURN's main (though not exclusive) focus in this and the other enforcement proceedings has been on issues that are most likely to have an impact on the PSEP cost responsibility issues -- primarily recordkeeping, integrity management, and the construction of Segment 180.

This brief – intended to supplement the thorough and persuasive showing already made by CPSD -- will demonstrate that PG&E committed serious violations of Public Utilities Code Section 451[4] and applicable California and federal regulations with respect to a variety of

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[1] PG&E's Phase 1 PSEP (covering the period through 2014) called for $2.2 billion in expenditures, and PG&E has estimated that Phase 2, beginning in 2015, could cost an additional $9 billion.
[2] D.12-12-030, slip. op., p. 4 (making PG&E's rate recovery for Phase 1 PSEP costs subject to refund).
[3] From the outset of the enforcement proceedings and R.11-02-019, which considered ratemaking for PG&E's Phase 1 PSEP, the Commission has been clear about the linkages between the ratemaking determinations and the findings in these enforcement cases. The OIRs in both this docket and I.11-02-016 noted that some PSEP costs may "stem from" recordkeeping or other deficiencies and that the ratemaking proceeding would take note of the record evidence in the enforcement cases. I.11-02-016, p. 15 and I.12-01-007, p. 11. Similarly, R.11-02-019 stated that the Commission would take notice of other proceedings, including I.11-02-016, in the Commission's ratemaking determination.
[4] Hereafter, statutory references are to the California Public Utilities Code.

deficient recordkeeping practices that jeopardized public safety. PG&E's more egregious violations include:

- Failing to possess pressure test records for tens of thousands of pipeline segments for which PG&E was required to create and retain such records for the life of the pipeline;
- Failing to possess readily available records showing where PG&E is transporting gas through re-used or reconditioned pipeline segments;
- Failing to create or retain any records at any time to verify that PG&E has properly performed the necessary work to make reconditioned pipeline safe for use, a serious error that directly contributed to the San Bruno explosion; and
- Failing to make any reasonable effort to verify the accuracy of the data in PG&E's geographic information system ("GIS") database on which the company heavily relied for its integrity management analysis.

PG&E has attempted to defend its dismal recordkeeping by arguing that federal regulations did not specifically prohibit PG&E's various deficient practices. In so arguing, PG&E ignores the fact that California law – particularly Section 451 and the Commission's General Order ("GO") 112 series -- has imposed higher pipeline safety and recordkeeping obligations than federal law for as long as PG&E has operated gas pipelines. None of PG&E's "expert" witness had any expertise in California law or California industry practices, rendering their testimony largely irrelevant.

II. BACKGROUND (PROCEDURE/FACTS)

TURN expects other parties to fully summarize the relevant procedural and factual background to this proceeding. TURN reserves the right to respond to the background discussions of other parties in its reply brief.

III. LEGAL ISSUES OF GENERAL APPLICABILITY

A. Public Utilities Code Section 451 Imposes a Separate and Independent Obligation on PG&E to Maintain the Records Necessary to Provide Safe Gas Service and Facilities

As long as PG&E has been operating as a gas utility, it has been obligated to meet the requirements of Section 451 (and its predecessor provisions) that require every public utility to "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." Although much of PG&E's conduct addressed in this proceeding violates specific and detailed provisions of the Commission's General Orders and federal pipeline safety regulations, PG&E's recordkeeping practices also need to be measured against the longstanding, bedrock obligation under Section 451 to maintain and operate a safe gas transmission system.

The Commission has made clear that its specific pipeline safety regulations in General Order ("GO") 112 (and its successors) are not intended to identify each and every unsafe practice that is proscribed by law. In adopting the first GO 112 and in subsequent revisions, the Commission emphasized that the detailed safety rules do not supplant the utilities' "primary obligation" under Section 451 to provide safe service and facilities:

> It is recognized that no code of safety rules, no matter how carefully and well prepared, can be relied upon to guarantee complete freedom from accidents. Moreover, the promulgation of precautionary safety rules does not remove or

> minimize the primary obligation and responsibility of [gas utilities] to provide safe service and facilities in their gas operations. Officers and employees of the respondents must continue to be ever conscious of the importance of safe operating practices and facilities and of their obligation to the public in that respect.[5]

Moreover, in GO 112 itself (and subsequent revisions), the Commission made clear that Section 451 continued to apply separately and independently of the new rules by specifying in Section 104.4 that "[c]ompliance with these rules is not intended to relieve a utility from any statutory requirements."

Similarly, the federal pipeline safety rules that became effective in 1970 establish only "minimum safety requirements."[6] California and the other states are free to impose additional requirements on the utilities, and the utilities' continuing obligations under Section 451 are one means by which California law may exceed the specific safety requirements detailed in the federal rules.[7]

PG&E's own witness, Mr. Howe, recognized that, in order to operate their systems safely, pipeline operators need to engage in recordkeeping and other practices that go beyond the requirements of particular regulations. He stated that operators' recordkeeping needs are not limited by specific regulations and that operators should make their own decisions about the records they need in order to operate their systems safely.[8] In his words, exceeding particular requirements to achieve safety is "the right thing to do."[9] He agreed that, as long as PG&E has

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[5] Decision (D.) 61269, approved Dec. 28, 1960 (Ex. PG&E-4), slip. op., p. 12. The Commission repeated the quoted language in its 1963 order adopting GO 112-A (D. 66399, slip. op. p. 12), its 1967 order adopting GO 112-B (Ex. CPSD-60, D.73223, slip. op. at 6), and its 1971 order adopting GO 112-C (Ex. PG&E-5, slip. op., p. 13),

[6] 49 C.F.R. Section 192.1(a).

[7] Ex. PG&E-7 (D. 95-08-053 adopting GO 112-E, slip. op., p. 9)

[8] Tr., vol. 9, pp. 1264-1265 (Howe/PG&E).

[9] Tr., vol. 9, pp. 1241-1242.

been an operator of gas pipelines, it has been obligated to retain the records necessary to operate the system safely.[10]

Mr. Howe's forthright testimony reflects a key purpose and intent of Section 451 – to ensure that utilities make all reasonable efforts to ensure the safety of their systems, whether or not such efforts are prescribed by particular regulations. Recordkeeping is a particularly important responsibility when transporting potentially explosive gas through underground pipelines. Under Section 451, operators need to have detailed and accurate records demonstrating the safety of these buried pipelines, regardless of whether such records are specifically required by other regulations.[11]

Notwithstanding the broad wording of Section 451, the Commission has ample authority to find violations based solely on Section 451 and to levy fines based on such violations. *Pacific Bell Wireless, LLC v. Public Utilities Commission*, 140 Cal. App. 4th 718, 741-743, 2006 Cal. App. LEXIS 905, *43-*50 (2006). The court in *Pacific Bell Wireless* cited with approval the Commission's decision in *Carey v. Pacific Gas & Electric Co.*, another gas safety enforcement action against PG&E, in which the CPUC explained:

> . . . it would be virtually impossible to draft Section 451 to specifically set forth every conceivable service, instrumentality and facility which might be defined as 'reasonable' and necessary to promote the public safety. That the terms are incapable of precise definition given the variety of circumstances likewise does not make Section 451 void for vagueness, either on its face or in its application to the instant case. The terms 'reasonable service, instrumentalities, equipment, and facilities' are not without a definition, standard or common understanding among utilities. Commission cases reviewing utility conduct frequently require that the conduct meet a standard of reasonableness. For example, in ratesetting

[10] Tr., vol. 9, p. 1266.
[11] Ex. TURN-16 (Long Testimony), pp. 6-7 ("utility bears the heavy responsibility of making its own judgment whether additional records, beyond those specifically required by law, are needed to ensure the safe operation of the system").

> proceedings, the disallowance of utility expenses, whether from contracts, accidents, or other sources are reviewed under a reasonableness standard.[12]

In sum, PG&E's Section 451 obligation to maintain the records necessary to operate a safe utility system applied throughout the time period covered by this case. With respect to PG&E's unsafe recordkeeping practices both before and after the adoption of the more detailed state and federal regulations, the Commission should not hesitate to find Section 451 violations when the record supports such findings.

B. PG&E Has the Burden of Proving Its Defenses

In this opening brief, TURN will defer to CPSD regarding the burden of proof in this proceeding. Here, TURN will simply note that, regardless of which party has the ultimate evidentiary burden relating to the alleged violations, PG&E bears the burden of proof as to its defenses. This is consistent with the general rule that a party has the burden of proof as to each fact the existence or nonexistence of which is essential to the claim for relief *or defense* the party is asserting.[13]

C. In the Event That the Commission Finds that Particular Conduct Does Not Constitute a Violation, For Ratemaking Purposes the Commission Should Consider Whether the Conduct Was Prudent – A Determination On Which PG&E Bears the Burden of Proof

One of TURN's interests in these proceedings arises from the close relationship between the factual issues being adjudicated in this case (as well as I.12-01-007) and the Commission's ratemaking determinations regarding PG&E's PSEP. PSEP is a potentially extensive program of expenses and capital expenditures that PG&E and other gas utilities were required to propose in accordance with D.11-06-017. In D.12-12-030, the Commission approved cost recovery and

[12] D.99-04-029, 1999 Cal. PUC LEXIS 215, 85 CPUC 2d 682, 689.
[13] D.12-02-032 (Tracfone Investigation), slip. op. at 4.

associated rate increases for elements of Phase 1 of PG&E's PSEP.[14] However, recognizing that the findings in this proceeding and the other two pending PG&E pipeline safety enforcement proceedings may lead to additional ratemaking adjustments, the Commission ordered that the rate recovery approved in D.12-12-030 was subject to refund.[15] Accordingly, the Commission should be mindful that its determination in this case will relate not just to fines and other remedies for adjudicated violations, but also to whether there should be additional disallowances of PSEP costs -- both the approved, but subject to refund, costs in Phase 1, and the yet-to-be proposed Phase 2 costs.

TURN's unrebutted testimony in this case explains the relationship between findings of violations and findings of imprudence:

> Violations and imprudence have overlapping, but different, standards. Violations require a showing that PG&E has failed to meet the requirements of a statute, regulation, order, or decision. A finding of imprudence would be appropriate whenever the evidence shows that PG&E did not behave in the manner that would be expected of a gas utility engaged in the transport of a dangerous, highly combustible commodity that is acting in a reasonable manner given industry standards and knowledge available at the time. By definition, any violation by PG&E would be imprudent, as a prudent gas utility would never violate legal requirements. However, PG&E conduct that is determined not to constitute a violation may nevertheless be imprudent if the conduct failed to comport with the behavior expected from a prudent gas pipeline operator.[16]

The Commission has long recognized -- and reaffirmed in D.12-12-030 – that, under the "just and reasonable" rate requirement of Section 451, shareholders should be required to absorb

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[14] Phase 1 addresses PG&E's PSEP activities and expenditures through 2014, and Phase 2 covers PSEP activities and expenditures in 2015 and later years. PG&E has not yet presented a Phase 2 PSEP proposal, but PG&E has estimated that Phase 2 expenditures could run as high as $9 billion. TURN Reply Brief, R.11-02-019, May 31, 2012, p. 16.

[15] D.12-12-030, slip. op., p. 4.

[16] Ex. TURN-16 (Long Testimony), p. 2.

costs that are caused by imprudent utility management.[17] In addition, Section 463 similarly requires the Commission to disallow all costs resulting from any unreasonable error or omission by a utility that relates to efforts to recover costs of utility plant exceeding $50 million.[18] As a result, findings of imprudence in this case would warrant ratemaking disallowance of any Phase 1 or Phase 2 PSEP costs that result from such imprudence.[19]

Moreover, it is well settled that *the utility* bears the burden of proof on the issue of prudence and that the utility is not entitled to a "presumption of prudence."[20] Thus, PG&E has the burden of demonstrating the prudence of its actions for purposes of determining whether Phase 1 or Phase 2 PSEP costs should be disallowed.

In sum, while TURN believes that the record fully demonstrates the violations alleged by CPSD, in the event the Commission disagrees, the Commission should make a separate determination of whether PG&E has met its burden of demonstrating the prudence of the conduct in question. Such prudence determinations will be important to ensuring that, consistent with Sections 451 and 463, PG&E is not permitted to impose on ratepayers costs that result from PG&E's managerial imprudence.

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[17] D.12-12-030, p. 122 (Conclusion of Law 13: "It is reasonable for PG&E's shareholders to absorb the portion of the [PSEP] costs which were caused by imprudent management."); D.94-03-048, 53 CPUC 2d 452, 456 (not reasonable to pass on to Southern California Edison ratepayers costs resulting from the Mohave Coal Plant accident); D.85-08-102, 18 CPUC 2d 700, 715-716 (ratepayers not responsible for bearing the consequences of PG&E's imprudence with respect to the construction of the Helms Pumped Storage Project); D.84-09-120, 16 CPUC 2d 249, 283 ("it would be unconscionable from a regulatory perspective to reward . . . imprudent activity by passing the resultant costs through to ratepayers.").

[18] The $50 million threshold is clearly met. PG&E's approved PSEP Phase 1 costs exceeded $1 billion (D.12-12-030, App. E, Table E-4), and, as noted, proposed Phase 2 costs may reach $9 billion.

[19] As noted, a violation of applicable law, by definition, would constitute imprudence and warrant the disallowance of all costs resulting from the violation.

[20] D.93-05-013, 49 CPUC 2d 218, 220; D.85-08-102, 18 CPUC 2d 700, 709-710.

D. Throughout the Relevant Time Period, California Law Has Imposed Stricter Recordkeeping Obligations Than Federal Law

An important theme of much of PG&E's testimony is that *federal* pipeline safety regulations did not require – and indeed condoned -- the recordkeeping practices on which CPSD's alleged violations are predicated. TURN does not agree with PG&E's interpretation of the requirements of federal law. However, even assuming (wrongly) that PG&E is correct, PG&E's arguments are ineffective to excuse the numerous alleged violations of California law because, throughout the period of alleged violations, California law imposed stricter and more extensive recordkeeping requirements than federal law.

Pre-1970. There can be no dispute that, in the absence of any federal pipeline safety regulations prior to 1970, the significant pre-1970 recordkeeping requirements of California law exceeded federal law.

As discussed above, Section 451 has always required PG&E to maintain the records necessary to operate its system safely. And federal law has never had a Section 451-type analog for federal pipeline safety. At a minimum, Section 451 required PG&E to comply with accepted industry practices regarding records that should be maintained.[21] The ASME B.31.8 industry standards, first promulgated in 1955, constituted such accepted industry practices. Accordingly, any records required expressly by the ASME B31.8 code or that were necessary to demonstrate compliance with B31.8 code requirements were records that an operator needed to maintain to satisfy Section 451.[22] Even PG&E's witness, Mr. Zurcher – who (unsuccessfully) sought to

[21] However, PG&E is incorrect in claiming that accepted industry practice constitutes an absolute defense to an alleged Section 451 violation. For example, if accepted industry practice was to fail to create or to discard records that PG&E should reasonably have recognized as necessary for the safe operation of pipelines, then such industry practice does not serve as a defense.

[22] In the discussion of Violation 18 below, TURN will demonstrate that PG&E's failure to retain pressure test records required by the B31.8 code beginning in 1955 violated Section 451.

disclaim any recordkeeping requirement other than those precisely articulated in federal regulations – acknowledged that an operator (such as PG&E) that followed the 1955 ASME code would be required to keep basic records documenting pipe specifications.[23]

Beginning in 1961, GO 112 specified a variety of records-related rules, including a separate chapter devoted to recordkeeping obligations. Those obligations included the highly significant verification requirements of Section 301.1, which stated:

> 301.1. The responsibility for the maintenance of necessary records to establish that compliance with these rules has been accomplished rests with the utility. Such records shall be available for inspection at all times by the Commission or the Commission Staff.[24]

Thus, Section 301.1 made explicit that utilities needed to retain documentation to demonstrate compliance with all the rules in GO 112 and to have such records *available at all times* for inspection by CPUC staff. A utility that required months, weeks, or even days to locate records clearly would not satisfy the "available at all times" requirement.

In addition, Section 302.1 made explicit that "[s]pecifications for material and equipment, installation, testing and fabrication shall be maintained by the utility."[25] With respect to pipelines, this rule explicitly required operators to retain records showing, among other things, the key features – such as material and grade, wall thickness, diameter, seam type, manufacturer and date of manufacture – of the pipe that was actually installed in the ground.

Section 104.4 clarified that GO 112 did not relieve utilities from any statutory requirements, which would include their safety obligations under Section 451.[26] Thus, GO 112 had no effect on operators' prior and continuing responsibilities to satisfy Section 451.

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[23] Tr., vol. 12, p. 1769 (Zurcher).
[24] Ex. CCSF-1, p. 61.
[25] *Id.*
[26] *Id.*, p. 5.

All of these provisions were carried through in the 1963 and 1967 revisions in GO 112-A[27] and GO 112-B,[28] respectively.

1970 to the Present. With the adoption of the federal pipeline safety regulations, effective November 12, 1970, California took advantage of its right to impose stricter recordkeeping requirements than federal law. In incorporating the new federal rules into California's requirements, the Commission made clear that all the requirements in GO 112-B, "to the extent that they are additional or more stringent than the Minimum Federal Safety Standards, shall remain in effect."[29]

GO 112-C (adopted in 1971) continued in effect each of the pre-1970 provisions of GO 112, 112-A and 112-B discussed above, renumbering them as Sections 121.1, 122 and 103.3 respectively.[30] By virtue of GO 112-C's incorporation of the federal rules, Section 121.1 (identical to the former Section 301.1) effectively required operators to maintain records to show compliance not just with the state rules, but also with all the federal pipeline safety regulations. This point is made explicit in the current GO 112-E (adopted in 1995), Section 101.4, which requires the utilities to "maintain the necessary records to ensure compliance with these rules *and the federal Pipeline Safety Regulation[s]* . . .."[31] Otherwise, Section 101.4 in GO 112-E perpetuates the original verification requirement from Section 301.1 of GO 112 that utilities keep the records necessary to show compliance with the California and federal rules and have them "available for inspection at all times" by CPUC staff.

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[27] D.66399, App. A.
[28] Ex. CPSD-60, App. A.
[29] Ex. PG&E-5, (D. 78513 adopting GO 112-C), p. 3 (referencing Res. G-1499).
[30] *Id.*, App. A.
[31] Ex. PG&E-7 (D.95-08-053, adopting GO 112-E), App. A.

GO 112-E, Section 103.3, also continues to make clear that these rules do not relieve utilities from any other statutory requirements, which would include Section 451. As noted, there is no analog to Section 451 in federal pipeline safety law, so Section 451 is another important respect in which post-1970 California law imposes more extensive recordkeeping requirements than federal law.

Summary. By virtue of Section 451, California law has always imposed more recordkeeping requirements on PG&E than federal law. In addition, California's specific pipeline safety regulations in GO 112 and its successors have always required PG&E to retain all records to show compliance with all applicable rules and to have such records readily available for CPUC staff review *at all times*. These verification requirements exceed the post-1970 recordkeeping obligations under the federal regulations. Thus, in assessing PG&E's compliance with recordkeeping requirements, California law, not federal law, sets the standards that PG&E was, and is, required to meet.

IV. OTHER ISSUES OF GENERAL APPLICABILITY

A. PG&E's 'Expert' Witnesses Admitted They Had No Expertise Regarding the Stricter Recordkeeping Requirements of California Law, If Any Recordkeeping Expertise At All

PG&E presented three supposed experts regarding recordkeeping laws and industry recordkeeping practices relating to gas transmission pipelines – Mr. De Leon, Mr. Howe, and Mr. Zurcher. However, in response to TURN's cross examination, all three men admitted that they were incompetent to offer expert opinions regarding recordkeeping requirements of California law applicable to California operators. Because, as shown in the previous section, California law sets the standard that PG&E's recordkeeping practices were required to meet, their testimony was therefore largely irrelevant.

Mr. Howe candidly admitted that his written testimony did not address California recordkeeping requirements and that he was not an expert in such requirements, or even the recordkeeping practices of California operators.[32]

Mr. Zurcher – consistent with the characteristic zeal to exonerate PG&E that he displayed throughout his testimony -- initially professed to be an expert in GO 112.[33] However, after some bungled interpretations of GO 112, he quickly retreated and acknowledged, multiple times, that in fact he was *not* an expert in GO 112.[34] Mr. Zurcher did not even try to factor Section 451 into his analysis.

Mr. Zurcher's ignorance of California recordkeeping requirements thoroughly undermined the value of his supposed expert testimony regarding accepted industry recordkeeping practices. As Mr. Zurcher admitted, a state's legal requirements affect what should be considered standard industry practice in that state.[35] Thus, without understanding California regulatory requirements regarding recordkeeping, he was in no position to offer credible expert testimony regarding standard recordkeeping practices in California.

Mr. De Leon admitted under cross-examination that *he did not consider himself an expert on recordkeeping requirements at all*.[36] That admission alone should disqualify all of his testimony from being given any weight.

If that admission is not enough, Mr. De Leon's cross-examination answers showed he had no understanding of – or ability to answer questions regarding – the written testimony he was sponsoring relating to California recordkeeping requirements. As an initial matter, he too

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[32] Tr., vol. 9, p. 1256 (Howe/PG&E).
[33] Tr., vol. 11, p. 1743 (Zurcher/PG&E)
[34] Tr., vol. 12, pp. 1789, 1804, 1826 (Zurcher/PG&E)
[35] Jt. Tr., vol. 7, p. 681 (Zurcher/PG&E).
[36] Tr., vol. 5, p. 783 (De Leon/PG&E)

did not even factor Section 451 into his analysis.[37] Moreover, even though the written testimony bearing his name featured an analysis of GO 112 requirements through time (with an obvious PG&E slant), he stated that he was not "qualified" to answer questions about the "intricacies" of California regulations and that such questions should be put to PG&E.[38] He explained that he was not an expert on GO 112 and its various iterations and that "the lawyers" had to explain it to him.[39] Regarding one portion of the written testimony offering an interpretation of GO 112 favorable to PG&E, he acknowledged that "someone else" drafted the testimony because he was not familiar with GO 112 and "they" had to explain "it all" to me.[40] It is reasonable to infer from the fact that PG&E needed to ask a completely unqualified witness to sponsor their testimony regarding GO 112 that PG&E could not find anyone knowledgeable about GO 112 who would support the view PG&E's attorneys wanted to present.

Evidently as a result of their ignorance of California recordkeeping requirements, both Mr. Zurcher and Mr. De Leon offered opinions about appropriate operator practices that are obviously out of step with longstanding California regulations. For instance, Mr. Zurcher opined that operators had no obligation to retain records showing how they calculated pipeline design pressures under Section 845.22(a) of GO 112[41] and had no obligation to produce such records upon request by CPUC staff.[42] He went so far as to claim that CPUC staff was required to trust

[37] Tr., vol. 5, p. 791 (De Leon/PG&E).
[38] Tr., vol. 5, p. 742 (De Leon/PG&E). However, there was no other PG&E witness to put such questions to.
[39] Tr., vol. 5, p. 783-784.
[40] Tr., vol. 5, pp. 785-786.
[41] Ex. CCSF-1, p. 47. The recordkeeping requirements following from the ASME B31.1.8 and GO 112 obligation to calculate design pressure are discussed more extensively in the section below relating to Violation 18.
[42] Tr., vol. 12, p. 1829 (Zurcher/PG&E).

the representations of the operator.[43] This testimony blatantly ignores the requirements of GO 112 and its successor orders, particularly Section 301.1 (and successor provisions) that required operators to maintain the records necessary to demonstrate compliance with the rules and to make such records available at all times to CPUC staff.

Similarly, Mr. De Leon testified that, if a regulator staff member on a site visit detected a highly unsafe situation that the operator knew to be unsafe, the regulator should still not find a violation if the regulator could not point to any specific rule that the operator has violated.[44] In fact, he was troubled by the Commission's express finding in its decisions adopting GO-112, 112-A, 112-B and 112-C that operators retained the "primary obligation" to provide safe service and facilities.[45] Thus, Mr. De Leon's perspective, like that of Mr. Zurcher, failed to recognize that California law has long imposed higher obligations than federal law and that Section 451 is violated whenever a utility engages in unreasonably unsafe practices, whether or not proscribed by a particular rule.

For all these reasons, Mr. Howe, Mr. Zurcher and Mr. De Leon failed to offer credible expert opinions regarding California recordkeeping requirements or accepted industry practices for California gas utilities.

[43] *Id.*, p. 1828.
[44] Tr., vol. 5, p. 796 (De Leon/PG&E).
[45] *Id.*, pp. 794-795.

V. ALLEGED VIOLATIONS PREDICATED ON THE REPORTS AND TESTIMONY OF MARGARET FELTS

CPSD has convincingly demonstrated the violations alleged in its reports and testimony. TURN expects that CPSD's opening brief will comprehensively summarize the evidence supporting all of the alleged violations. In the following sections, for certain key violations, TURN presents analysis and argument to emphasize significant points in the record – particularly those developed through TURN's cross examination -- and to supplement CPSD's presentation.

A. Alleged Records Violations Relating to Line 132, Segment 180, San Bruno Incident

1. Violation 1 (Salvaged Pipe Records): In Violation of Section 451, PG&E Failed to Have Accurate Records Regarding the Source, Specifications and Reconditioning of the Failed Pipe in Segment 180

It is undisputed that PG&E failed to possess accurate records documenting the source and specifications of the pipe in Segment 180 that failed. As CPSD's investigator, Ms. Felts, explained, this failure reflected a seriously unsafe situation: "Without records about the source, specifications, or history of the pipe, it was possible for pipe to be salvaged, sent out to be re-wrapped and delivered to the construction site without anyone knowing or being able to observe the condition of the pipe."[46] This failure to accurately track the source and specifications of the pipe that was actually installed in Segment created an extremely unsafe situation in violation of Section 451.

[46] Ex. CPSD-2 (Felts Report), p. 2

One element of PG&E's recordkeeping violation with respect to Segment 180 was its failure to keep records of the reconditioning work that PG&E admits needed to be performed before the pipe that was used in Segment 180 could be made ready for service.[47]

With respect to reconditioning of Segment 180, the record shows the following. Although PG&E does not know if Segment 180 contained previously used pipe, PG&E acknowledged that the pipe used during the 1956 project at least needed to be reconditioned before being placed in service.[48] That is because PG&E believes the pipe was drawn from stock left over from purchases made as early as 1948 and no later than 1953.[49] By the time of the Segment 180 project in 1956, the anti-corrosion wrapping on the outside of the pipe would have deteriorated in the sun, and, at a minimum, the old wrapping would need to be removed and the pipe re-wrapped.[50]

PG&E claims that a 1988 internal memo is likely representative of the process that PG&E should have followed for reconditioning pipe in the 1950s and 1960s.[51] The process included removing old coatings; visually inspecting the pipe, including longitudinal seams; and re-wrapping the pipe.[52] A 1960 PG&E standard practice document showed that reconditioning work would be performed at PG&E's Decoto Pipe Yard in Union City.[53] Mr. Harrison stated that at least the cleaning and inspecting part of the reconditioning process would have been

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[47] This failure to keep records of reconditioning work for Segment 180 was one instance of a system-wide failure by PG&E discussed in the section of this brief addressing violation 23.
[48] Tr., Jt. Vol. 4, p. 599: 17-27 (Harrison).
[49] Ex. PG&E-1 (I.12-01-007), p. 2-3.
[50] Tr. Jt. Vol. 4, p. 599:27 – 600:5 (Harrison).
[51] Ex. PG&E-61 (Harrison), p. 3-29; Tr., Jt. Vol. 4, p. 481:7-22. TURN cites this 1988 document as evidence of the process that PG&E thought should be used for reconditioning pipe. However, as discussed below with respect to violation 23, in defending against CPSD's record-keeping allegations, PG&E has not met its burden of showing that the steps in the 1988 memo were actually performed by PG&E.
[52] Ex. PG&E-61 (Harrison), p. 3-29.
[53] Ex. PG&E-61 (Harrison), p. 3-29.

performed at PG&E's Decoto Yard in the 1950s.[54] Mr. Harrison acknowledged that, although it would have been good engineering practice to document reconditioning work, he has never seen such records at PG&E.[55]

Mr. Harrison admitted that, prior to re-wrapping, the nonconforming pup sections would have been visible to the naked eye.[56] He further acknowledged that, if PG&E's employees had done a visual inspection inside and out of the seam welds (as the 1988 memo says should have been done), they would have seen the missing seam weld.[57]

Accordingly, the record shows that PG&E should have inspected Segment 180 as part of the reconditioning process and should have discovered both the nonconforming pup segments and the missing interior seam weld. Clearly, PG&E failed to perform this necessary safety inspection. If PG&E employees had actually inspected the pipe, it never would have been installed.[58]

Of particular importance to this case, because PG&E failed to keep records showing that the necessary reconditioning and inspection work was performed, PG&E missed a vital opportunity to discover its failure to properly recondition and inspect Segment 180. If PG&E had a requirement to document reconditioning steps and retain a record of this work, it is highly likely that the San Bruno explosion would have been avoided. Sadly, the San Bruno explosion shows the serious consequences of PG&E's sloppy and inadequate recordkeeping.

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[54] Tr. Jt. Vol. 4, p. 580:7-9.
[55] Tr, Jt. Vol. 4, pp. 465-466 (Harrison/PG&E)
[56] Tr. Jt. Vol. 4, p. 542:7-10.
[57] Tr. Jt. Vol. 3, p. 394:15-20.
[58] Tr. Jt. Vol. 3, p. 394:22-24.

2. Violation 3 (Pressure Test Records): PG&E's Inability to Document a Pre-Service Pressure Test of Segment 180 Violates Section 451

At the time that PG&E installed Segment 180 in 1956, the industry standards for gas transmission pipelines in ASME B31.1.8-1955 specified that all pipelines (such as Segment 180) to be operated at a hoop stress of 30% or more of the pipe's SMYS were to be given a pressure test in the field before being placed in operation.[59] The standards further required that records of such pressure tests "shall" be retained for the life of the pipeline.[60] PG&E admits that it cannot locate records showing that it conducted a post-installation pressure test in 1956.[61]

Even though it does not dispute these facts, PG&E contends that its inability to document the requisite pressure test does not constitute a violation because the 1955 ASME standards were voluntary. This claim ignores PG&E's obligation under Section 451 to maintain and operate a safe gas transmission system. In D.12-12-030, regarding PG&E's Phase 1 PSEP, the Commission has already found that PG&E's practice was to comply with the 1955 ASME standards regarding pressure testing;[62] PG&E does not dispute that point in this case. Clearly, PG&E itself made the judgment that the ASME standards identified reasonable practices for promoting safe pipeline facilities.

D.12-12-030 rejected PG&E's argument that the voluntary nature of the standards excused PG&E's inability to document compliance with them:

> We do not agree that the change from an industry practice to regulatory mandate somehow excuses PG&E's failure to retain the pressure test records. As noted above, the record supports the finding that PG&E stated that from 1956 on, PG&E's practice was to pressure gas system test pipeline prior to placing it in service and that the costs of such testing was passed on to ratepayers. As required

[59] ASME B31.1.8-1955, Section 841.41.
[60] ASME B31.1.8-1955, Section 841.417.
[61] Ex. PG&E-1 (I.12-01-007, Harrison), p. 2-7.
[62] D.12-12-030, p. 59.

> by industry practice and prudent natural gas transmission system operations, PG&E should have created and maintained records of those pressure tests.[63]

Although the Commission in D.12-12-030 was examining PG&E's failings in the context of a ratemaking disallowance, the same reasoning compels the conclusion that PG&E's failure to comply with an industry standard that PG&E adopted as a company standard constituted an unreasonably unsafe practice in violation of Section 451. Indeed, PG&E acknowledged that pre-service pressure testing is important for safety reasons and that maintaining records of such tests is both good engineering practice and important for safety.[64]

Accordingly, it is undisputed that accepted industry standards to which PG&E subscribed mandated retention of pressure test records for pipe segments installed beginning in 1955. Under these circumstances, PG&E clearly violated Section 451 in failing to document a pressure test for Segment 180.

B. Alleged General Records Violations for All Transmission Lines Including Line 132

1. Violation 18 (Design and Pressure Test Records)

Beginning no later than ASME B31.1.8 in 1955, the industry standard was for MAOP to be determined by the lower of (1) design pressure and (2) the pressure obtained by dividing installed test pressure by the appropriate factor for class location.[65] As shown in the discussion above regarding Violation 3, Section 451 required PG&E, at a minimum, to comply with the industry standards set forth in ASME B31.1.8 (and its successors). The ASME methodology for establishing MAOP was incorporated into GO 112 beginning in 1961 and continuing throughout the 1960s in GOs 112-A and 112-B. Similarly, the 1970 federal regulations, incorporated in GO

[63] D.12-12-030, p. 60.
[64] Tr., Jt. Vol. 3, pp. 414:22-415:18 (Harrison).
[65] Ex. PG&E-47 (ASME B31.1.8), Section 845.22.

112-C and its successors, require both design pressure and test pressure calculations to be made before MAOP can be determined for all post-1970 pipe segments.[66]

The key point is that, beginning no later than 1955 and continuing without interruption to the present, PG&E has been required under California law to conduct a pressure test and to calculate a design pressure for each pipe segment it has installed. In addition, by virtue of Section 451 prior to 1961 and, from 1961 on, under Section 301.1 and its successor provisions in California's GO 112 series, PG&E has been required – again, beginning no later than 1955 and continuing without interruption to the present -- to retain records to document compliance with these requirements and to have such records available for inspection at all times. Moreover, throughout this period, particular rules – beginning with Section 841.417 in ASME B31.1.8 -- have specifically required PG&E to retain records of post-construction pressure tests for the life of the pipeline.[67]

In the following sections, we discuss PG&E's numerous and serious violations of these requirements.

a. By Failing to Retain and Make Readily Available Documentation of Pressure Tests, PG&E Has Committed Tens of Thousands of Violations

PG&E cannot and does not dispute that it is unable to document a post-construction pressure test for numerous segments installed from 1955 to the present. The only issue is how many violations PG&E committed.

The best evidence in the record on the quantity of violations is Exhibit TURN-4, a response to a joint TURN-CPSD data request that provides a list of pipeline segments in Class 3

[66] 49 C.F.R. Section 192.619(a).
[67] Ex. PG&E-47 (ASME B31.1.8), Section 841.417, which was incorporated into GO 112, 112-A and 112-B; 49 C.F.R. Section 192.517.

and 4 locations and in Class 1 and 2 high consequence areas (collectively "HCA") for which PG&E lacks pressure test records. As shown in TURN's cross examination of Mr. Singh, the Excel spreadsheet attached to Exhibit TURN-4 shows that PG&E lacks pressure test records for approximately 19,000 segments in HCA locations installed in 1955 or later.[68]

However, Exhibit TURN-4 only reflects a subset of PG&E's transmission system. The HCA segments covered by TURN-4 comprise less than one-third of PG&E's system -- only 2,088 miles out of PG&E's total system mileage of 6,750.[69] PG&E stated that it did not have records showing the non-HCA segments for which it lacked pressure test records because it was still searching for such records.[70] In light of PG&E's inability to provide complete data, it is fair to infer that PG&E has done an equally poor job of documenting pressure tests for its non-HCA segments. As a result, the record shows that the total number of system-wide segments for which PG&E lacks pressure test records exceeds 50,000.[71]

There are even more violations. As noted, the verification requirements of Section 301.1 of GO 112 and its predecessor provisions have required PG&E to make its pressure test records available at all times for inspection by CPUC staff. PG&E has clearly not met this standard for the numerous segments for which PG&E has needed to undertake a lengthy and extensive search in order to locate pressure test records. Just in the Cow Palace exercise alone, PG&E devoted more than 150,000 hours of employee time to looking for additional strength test records.[72] Furthermore, in response to the TURN-CPSD August 30, 2012 data request, PG&E was unable

[68] Tr., vol. 6, pp. 967-971 (Singh/PG&E). Because ASME B31.1.8 does not show a particular effective date in 1955, a conservative approach to quantifying violations would be to not find violations for pipe installed prior to January 1, 1956. This would reduce the 19,000 segment violation number by the approximately 500 segments shown in the spreadsheet that were installed in 1955.
[69] Tr., vol. 6, p. 963; Ex. PG&E-61(Singh), p. 1-24.
[70] Ex. TURN-4, p. 2.
[71] Based on 19,000 HCA violations (1/3 of system) times 3, which equals 57,000 violations.
[72] Tr., vol. 6, pp. 893-894 (Singh/PG&E).

to provide any data regarding non-HCA segments for which PG&E lacked a pressure test record, indicating that PG&E's search for non-HCA records would not be completed until April 2013.[73] In other words, in light of the fact that PG&E's Commission-mandated search for pressure test records began in January 2011, PG&E will ultimately need *16 months* to complete its search. Although serious PG&E's recordkeeping problems prevent a precise quantification of the number of segments for which pressure test records were not "available at all times," it is fair to infer that a significant percentage of the located records did not meet this standard, adding to the already huge number of violations.

b. PG&E Has Violated California Law for Each Segment for Which It Failed to Retain the Basic Documents Necessary to Determine Design Pressure

Beginning with Section 841.1 of ASME B31.1.8-1955, the design pressure calculation has required basic data about the installed pipeline's specifications, including: specified minimum yield strength ("SMYS"), diameter, wall thickness, and a longitudinal joint factor based on the seam weld type. According to Mr. Zurcher, to determine these values, the operator would need basic records showing the pipe's specifications, such as engineer's specifications, the purchase order, or the invoice/delivery documents.[74] Mr. Zurcher conceded that, to demonstrate compliance with the design pressure calculation requirements, the operator would need to retain these records.[75]

As shown above, California operators have been required to determine design pressure under Section 451 and the GO 112 series from 1955 to the present. As is also shown above, over the same time period, Section 301.1 and its successor provisions have required PG&E to

[73] Ex. TURN-4, p. 2.
[74] Tr., vol. 12, pp. 1761-1762, 1763-1764, 1767-1769 (Zurcher/PG&E).
[75] Tr., vol. 12, pp. 1768-1769 (Zurcher/PG&E).

maintain all records necessary to demonstrate that the utility has properly calculated design pressure for each installed segment. As a result, PG&E has been required to retain the above-described records showing the specifications of the installed pipeline for all segments installed from 1955 to the present. In addition, as noted previously, GO 112's Section 302.1, and its successor provisions in the GO 112 series, specifically required utilities to maintain specifications records for pipelines. For each segment for which such records are lacking, PG&E has violated California law.

2. Violation 23 (Records to Track Salvaged and Reused Pipe): PG&E Violated Section 451 and the GO 112 Series By Failing to Track Its Use of Reconditioned Pipe in Its System and By Failing to Document the Work Performed to Recondition Pipe Prior to Installation

It is undisputed that PG&E's installed pipe is sometimes pipe that was manufactured years before its date of installation. Not infrequently, the pipe being used to transport highly flammable gas is previously used pipe or pipe that was left over from a previous job.[76] In either case, the pipe needs to be reconditioned before it can be made safe for transporting gas.[77] This investigation revealed two unsafe – and extremely disturbing – PG&E practices with respect to such reconditioned pipe.

First, prior to the San Bruno explosion (and perhaps to this day), PG&E did not have readily accessible records showing where it is using reconditioned pipe. In the words of Mr. Harrison's testimony: "PG&E does not in all instances know where reconditioned pipe has been placed in the transmission system."[78] Nearly two years after PG&E began a Commission-mandated intensive search of its records following the San Bruno explosion, PG&E *still* did not

[76] Ex. PG&E-61 (Harrison), p. 4-2 (use of reconditioned and re-used pipe a common practice).
[77] *Id.*, p. 4-4 (discussing steps that would need to be performed to make reconditioned pipe safe for re-use).
[78] Ex. PG&E-61 (Harrison), p. 3-32.

know all the locations in which re-used pipe is transporting gas.[79] Put another way, PG&E lacked any centralized process of tracking reconditioned pipe within the company.[80] As a result of this alarming recordkeeping lapse, PG&E's databases were using inaccurate information – date of installation rather than date of manufacture – to establish the age of its pipe.[81]

The failure to track the use of reconditioned pipe in readily accessible records poses a significant and unreasonable threat to safety in violation of Section 451. Absent such tracking, PG&E is unable to accurately determine the age of its pipeline, a key piece of information generally for maintenance purposes and specifically for integrity management (as will be discussed further below, regarding Violation 25). In fact, pipe may be years or even decades older than shown in PG&E's GIS database.[82]

Second, PG&E has no records showing what, if any, steps were taken to recondition re-used or leftover old pipe to make it suitable for installation. Beginning with Section 811.27 of ASME B31.1.8 in 1955, continuing with GO 112, 112-A and 112-B (all of which incorporated Section 811.27) and including Section 192.55(b) and Appendix B of the federal regulations, operators have long been required to undertake a variety of steps to recondition used pipe to make it safe for re-use. PG&E claims that it would typically perform a number of reconditioning steps, including: heating pipe to remove the old coating; externally sandblasting the pipe; visually inspecting the pipe surface for corrosion and pitting; inspecting longitudinal seam welds

[79] Tr., Jt. Vol. 3, p. 435 (Harrison/PG&E).
[80] Ex. CPSD-4 (Felts Rebuttal), p. 4.
[81] Tr., Jt. Vol. 11, p. 1169 (Keas/PG&E)
[82] Tr., Jt. Vol. 4, pp. 585, 587 (Mr. Harrison unable to tell if PG&E pipe listed in PG&E's database as dating from 1948 was actually reconditioned "PG&E Spec" pipe manufactured in the 1920s or 1930s.)

inside and out; removing damaged sections of pipe; removing certain types of girth welds and rebeveling the pipe ends; and wrapping the pipe.[83]

Although such reconditioning steps were mandated by applicable regulations and acknowledged by PG&E to be needed to make the old pipe ready for use, PG&E failed to keep any records showing, for a given piece of reconditioned pipe, the reconditioning steps (if any) that were actually performed to make the pipe safe. Mr. Harrison admitted that it would be good engineering practice to keep records showing that the necessary reconditioning steps were carried out, but that PG&E does not have such records.[84]

PG&E's failure to document reconditioning work required under state and federal regulations is a violation of Section 301.1 (and its successors) of the GO 112 series. PG&E committed this violation for each reconditioned pipe segment installed from 1961 to the present, a number that cannot be determined in the record because of the above-described failure to track use of reconditioned pipe in the system.[85] By failing to document reconditioning work, PG&E was unable to establish compliance with the rules or to make such records available to the CPUC. Unfortunately, the San Bruno explosion all too vividly demonstrates the danger posed by this violation. As noted in the discussion of Violation 1 above, had PG&E maintained a practice

[83] Ex. PG&E-61 (Harrison), p. 3-29, referring to Ex. PG&E-65, Tab 3-4 (1988 memo purporting to describe process used in the 1950s and early 1960s for A.O. Smith pipe manufactured in the late 1920s and 1930s). This memo is not a contemporaneous record of practices that PG&E actually employed and should only be given weight as a reflection of PG&E's view of the process that *should* have been followed.

[84] Tr., Jt. Vol. 4, pp. 465-66, 478 (Harrison/PG&E).

[85] Mr. Harrison estimated that as many as 133 miles of PG&E's 5800-mile transmission system could consist of re-used pipe (Tr., Jt. Vol. 3, pp. 437-438), an estimate that does not provide the number of segments, the necessary figure to quantify the violations.

of documenting reconditioning work, the company likely would have recognized that Segment 180 had not been properly reconditioned and inspected and that it was not fit for service.[86]

3. Violation 24 (Data in Pipeline Survey Sheets and the Geographic Information System)

a. In Violation of Section 451, PG&E Failed to Take Reasonable Steps to Verify the Accuracy of Its GIS Data

It is undisputed that there are numerous errors in PG&E's GIS database.[87] The NTSB Report, focused just on the pipe related to the accident, found that PG&E's GIS included "many obvious errors in key pipeline parameters, including but not limited to seam type, SMYS, and depth of cover."[88] PG&E did not attempt to rebut these findings in its testimony.

PG&E resisted providing any information that would enable a comprehensive examination of errors in GIS,[89] despite the efforts of TURN and CPSD to obtain such information in discovery. Exhibit TURN-10,[90] PG&E's response to a joint TURN-CPSD data request seeking an identification of GIS errors discovered by PG&E, did not identify any errors or even point out what PG&E belatedly admitted in a supplemental response[91] – that there were processes in place from which errors could be identified. TURN anticipates that CPSD's brief will address the belated data PG&E finally provided in its supplemental response.

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[86] The value of contemporaneous documentation of reconditioning work is shown by the 1988 memo PG&E presented in Tab 3-4 of Ex. PG&E-65. PG&E prepared that memo – attempting to describe practices that took place 30 or so years ago – to meet a need that developed in 1988. Mr. Harrison grudgingly admitted the obvious -- that it would have been useful to have contemporaneous documentation of the actual reconditioning work that was performed. Tr., Jt. Vol. 4, pp. 483-484.
[87] Ex. PG&E-61 (Cowsert-Chapman), p. 3-66.
[88] NTSB Accident Report, August 30, 2011, p. 108.
[89] Even though the integrity management program that Ms. Keas manages relies heavily on GIS data, she testified that she has made no effort to quantify the percent of pipeline segments in GIS that have some erroneous information. Tr., vol. 11, p. 1605.
[90] Ex. TURN-10 (Response to CPSD-TURN Data Request 1-2)
[91] Exhibit CPSD-64 (Supplemental Response to CPSD-TURN Data Request 1-2)

Here, TURN focuses on PG&E's inadequate efforts to prevent errors in the GIS database – the database (as shown in the following discussion regarding Violation 25) that served as the crucial starting point for PG&E's integrity management analysis. The record shows that PG&E failed to undertake reasonable efforts to verify the accuracy of its GIS data.

There were two steps in the migration of data from the records in PG&E's job files to GIS. The first step was to transfer information from the job files to pipeline survey sheets.[92] The second step was to import data from the pipeline survey sheets into GIS.[93] Ms. Cowsert-Chapman admitted that both steps created opportunities to introduce errors into the GIS database.[94]

PG&E is unaware of any quality control process for the first step.[95] PG&E simply assumed that this transfer of data was accurate.[96] In addition, PG&E has no documentation of a quality control process for the second step even though that took step place not so long ago, in the early to mid-1990s.[97] Thus, PG&E is unable to document any effort to verify the accuracy of the transfer of data in either step.

As a defense (on which PG&E bears the burden of proof) to this undisputed record evidence, PG&E claims that there was some sort of informal quality control process for the second step.[98] This defense is thoroughly unpersuasive, for the following reasons:

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[92] Tr., vol. 13, pp. 1965-1966 (Cowsert-Chapman/PG&E).
[93] Ex. PG&E-61 (Cowsert-Chapman), p. 3-66.
[94] Tr., vol. 13, pp. 1966-1967.
[95] Ex. TURN-12 (response to TURN DR 2-19).
[96] Tr., vol. 13, p. 1968 (Cowsert-Chapman/PG&E).
[97] Ex. TURN-12; Tr., vol. 13, p. 1969 (Cowsert-Chapman/PG&E).
[98] Ex. PG&E-61 (Cowsert-Chapman), p. 3-66 (referencing a "form of quality control process").

- The witness PG&E chose to explain the supposed process, Ms. Cowsert-Chapman, had no first-hand knowledge of it; she was not even an employee of the company when PG&E supposedly used it.[99]

- Three current PG&E employees were the supposed source of the information about the claimed quality control process, but they were not offered for cross-examination.[100] Mr. Cowsert-Chapman knew of no reason why they could not testify in this case.[101]

- Ms. Cowsert-Chapman is not even sure she spoke to the claimed sources of first-hand information before her testimony was prepared and served.[102]

- In discovery, PG&E resisted providing TURN information about the sources of supposed first-hand information and what they said, and only divulged the identity of the claimed first-hand sources after TURN sought the intervention of the administrative law judge.[103]

- In any event, PG&E never claimed that it made an effort to verify the accuracy of the transfer of data to the pipeline survey sheets in the first step.

Under these circumstances, PG&E's hearsay testimony about the claimed quality control process is not entitled to any weight and should be disregarded. The bottom line is that PG&E

[99] Tr., vol. 13, pp. 1973-1974.
[100] Tr., vol. 13, pp. 1978-1981.
[101] Tr., vol. 13, p. 1983.
[102] Tr., vol. 13, pp. 1975-1976.
[103] Ex. TURN-12 (PG&E's original non-responsive response); Tr., vol. 13, p. 1977 (admission by Cowsert-Chapman that PG&E failed to answer TURN's request to identify the first-hand sources); Ex. TURN-13 (supplemental response, after ALJ intervention).

has presented no credible evidence that it made any effort to verify the accuracy of the data in its GIS system. PG&E's failure to make any reasonable effort to assess – let alone ensure -- the accuracy of data in the important GIS database constitutes a serious violation of Section 451.

b. PG&E Has Not Attempted to Determine the Extent to Which Its Numerous GIS Errors Corrupted Its Integrity Management Determinations

Even though PG&E claims that it has initiated a process to identify errors in GIS,[104] PG&E has shown a disturbing disinterest in promptly correcting GIS errors and determining whether such errors corrupted PG&E's integrity management program. PG&E admitted that it has made no comprehensive effort to validate the data in its current GIS database, GIS 2.0.[105] Even though PG&E could correct GIS errors it discovers immediately, the company instead has chosen to wait until its next annual update to make the corrections.[106] Furthermore, Ms. Keas admitted that PG&E has not attempted to determine how data errors in GIS may have affected any of the components of its integrity management analysis, including threat identification, risk assessment and threat remediation.[107]

PG&E's failure to assess the impact of its GIS errors on its past integrity management analysis is evidence of a utility that continues to put its financial interest ahead of safety concerns. Instead of promptly determining whether data errors led to incorrect integrity management outcomes and trying to learn from its mistakes, PG&E has adopted a "we'll try to fix it in the future" mentality. That approach serves well PG&E's litigation interest in avoiding the creation of any evidence that would make clear the consequences of PG&E's inaccurate data

[104] Ex. PG&E-61 (Cowsert-Chapman), p. 3-66.
[105] Ex. TURN-10, p. 2.
[106] Tr., vol. 11, pp. 1613-1615 (Keas/PG&E, responding to questions from the ALJ).
[107] Tr., vol. 11, pp. 1617-1620.

– namely work that would or should have been done if the data were accurate. In TURN's fines and remedies brief, we will return to this point. For now, TURN notes that PG&E's apparent strategy has greatly increased the difficulty for the Commission to determine which PSEP projects would be unnecessary if PG&E had used accurate data for integrity management.

4. Violation 25 (Data Used in Integrity Management Risk Model): PG&E's Failure to Make Reasonable Efforts to Ensure the Accuracy of the GIS Data Violated Integrity Management Regulations

TURN anticipates that CPSD's brief will summarize the record testimony showing PG&E's many recordkeeping failures that violated federal integrity management requirements. Here, TURN will focus on demonstrating that PG&E's failure to verify the accuracy of its GIS data violated these federal regulations.

There should be no reasonable question about the importance of using accurate data for integrity management. Section 192.917 outlines the key stages of the program: identifying threats, assessing the threats for the risks they pose, and taking appropriate steps to remediate risks. If the data used at any of these stages is not accurate, then threats may not be identified and assessed and safety risks may not be timely addressed.

ASME B31.8S,[108] incorporated by reference into the Subpart O integrity management regulations, makes clear the importance of accurate data. Section 5.7(e) of that document mandates: "Any data applied in a risk assessment process shall be verified and checked for accuracy (see para. 12). Inaccurate data will produce a less accurate risk result."[109] This statement is made in reference to the risk assessment process, but its logic obviously applies to all data relied upon at each stage of the integrity management analysis.

[108] Ex. Joint 28.
[109] *Id.*, Section 5.7(e) (referencing Paragraph 12 mandating the use of a quality control plan).

PG&E's witness, Mr. Howe, recognized the dangers posed by inaccurate data. He acknowledged that inaccurate information is not only useless, but affirmatively bad because it could lead to an incorrect decision as to how to deal with a risk.[110] In Mr. Howe's words, when you don't know whether a record is inaccurate and you rely on it, "that's a bad thing."[111]

Ms. Keas conceded that GIS errors could lead to errors in threat identification. She agreed that GIS is an important tool for this initial step of the integrity management analysis[112] and that inaccurate GIS data could cause PG&E to fail to identify threats that would be identified if the data were inaccurate.[113]

In sum, PG&E's failure to make a reasonable effort to verify the information it relied upon for integrity management was fundamentally destructive of the purpose of the program. If PG&E is not held responsible for failing to undertake reasonable efforts to have accurate records, then operators have little incentive to ensure that their records are accurate. An integrity management program that is based on incorrect records provides a false sense of security and therefore is probably more harmful than beneficial to pipeline safety.

VI. ALLEGED VIOLATIONS PREDICATED ON THE REPORTS AND TESTIMONY OF DR. PAUL DULLER AND ALISON NORTH

At this time, other than the information summarized in Section VIII below, TURN has no further analysis to supplement the comprehensive and insightful analysis of CPSD. TURN reserves the right in its reply brief to address points raised by other parties.

[110] Tr., vol. 9, pp. 1266-67 (Howe/PG&E).
[111] *Id.*, p. 1267.
[112] Tr., Jt. vol. 11, p. 1154.
[113] *Id.,* p. 1167.

VII. OTHER ISSUES RAISED BY TESTIMONY OF CCSF

At this time, TURN has no issues to discuss in this section of the brief that have not been discussed elsewhere, but reserves the right in its reply brief to address issues raised by other parties.

VIII. OTHER ALLEGATIONS RAISED BY TESTIMONY OF TURN

TURN presented the unrebutted testimony of Thomas Long. Mr. Long's testimony addressed two topics. First, the testimony explained the ratemaking reasons why, in the event that the Commission does not find that deficient PG&E conduct constitutes a violation of applicable law, the Commission also needs to determine whether the conduct was imprudent.[114] This point is addressed in Section II.C of this brief.

Second, TURN's testimony presented the then-recently released final report of outside consultants from PriceWaterhouseCooper ("PwC") assessing PG&E's records and information management ("RIM") for its gas operations. Even though that report was not an historical examination of PG&E's recordkeeping practices, PwC found that, over a year after the San Bruno explosion, PG&E's recordkeeping practices still continued to show many of the same serious and long-standing problems discussed at length in CPSD's report of Dr. Duller and Ms. North.[115] Those continuing problems included:

- There is little formal RIM Governance within Gas Operations
- Information is often incomplete, unreliable, and not fully traceable
- Clearly defined RIM procedures and quality controls are lacking within key work processes

[114] Ex. TURN-16, pp. 1-3.
[115] Ex. TURN-16, pp. 4-5.

- Employees have challenges easily and efficiently identifying and accessing key records for their work
- There is a lack of clear standards, work procedures, and training for how staff should create, manage, transfer, store, and dispose of records and information
- Existing processes are very manual, heavily paper-based, and may differ between office locations
- There are numerous and disparate technology applications and systems where data is stored in parallel to paper-based records. Both paper and electronic populations contain gaps and errors
- Information is not managed throughout its lifecycle; nor is it managed as a corporate asset[116]

The PwC Report both corroborates the findings and analysis of the Duller and North Report and underscores the depth and persistence of the problems in PG&E's record-keeping for its gas operations.[117]

IX. OTHER ALLEGATIONS RAISED BY TESTIMONY OF CITY OF SAN BRUNO

At this time, TURN has no issues to discuss in this section of the brief that have not been discussed elsewhere, but reserves the right in its reply brief to address issues raised by other parties.

X. CONCLUSION

The record in this proceeding demonstrates numerous and serious PG&E violations of Section 451 and California and federal regulations. Because of the importance of the

[116] Ex. TURN-16, App. B (PwC Report, p. 8).
[117] Ex. TURN-16, p. 6.

Commission's conclusions in this case to current and future PSEP ratemaking, in the event the Commission does not find that particular deficient conduct constitutes a violation, the Commission should determine whether PG&E has met its burden of showing the reasonableness of its actions.

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Respectfully submitted,

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