

**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 & Electric  
Company's Natural Gas Transmission System in  
Locations with Higher Population Density.

I.11-11-009  
(Issued November 10, 2011)

**REPLY BRIEF OF THE CITY AND COUNTY OF SAN FRANCISCO**

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## I. INTRODUCTION

Pursuant to the November 19, 2012 Assigned Commissioners' ruling, the City and County of San Francisco submits this reply brief. San Francisco addresses the following: (i) PG&E's failure to justify its use of SMYS above 24,000 psi, (ii) PG&E's arguments regarding the "irrelevance" of CPSD's allegations, and (3) the need for strong enforcement of safety regulations.

Tellingly, PG&E did not dispute the many violations alleged by CPSD, or that the violations demonstrate the failure of PG&E to meet its obligation to provide safe and reliable service. Instead PG&E attempts to downplay the severity of its offenses, and highlight the many remedial actions PG&E has already taken. Contrary to PG&E's suggestion, the many remedial measures already underway are evidence of the extent of the violations rather than a basis for excusing those same violations.

## II. ARGUMENT

### A. PG&E Has Failed To Justify The Use Of SMYS Values Greater Than 24,000 psi.

As demonstrated in San Francisco's opening brief, there are at least three reasons that PG&E's use of assumed SMYS values above 24,000 psi does not constitute safe and reliable service.<sup>1</sup> First, because PG&E's records "include[] many obvious errors in key pipeline parameters, including but not limited to seam type, SMYS, and depth of cover"<sup>2</sup> they are an inadequate foundation upon which to make conservative assumptions. Second, because PG&E tracks only the date of installation and not the date of manufacture it lacks the necessary information to make conservative assumptions about the "minimum SMYS represented in the procurement standards from the era in which the pipe in question was purchased."<sup>3</sup> Third, because "PG&E does not in all instances know where reconditioned pipe has been placed in its transmission system"<sup>4</sup>, using conservative assumptions PG&E should assume that for any segments where PG&E does not know the pipe specification, that segment may contain older

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<sup>1</sup> San Francisco Opening Brief at pp. 6-10.

<sup>2</sup> NTSB report at p. 108 (emphasis added).

<sup>3</sup> Exhibit PG&E-1 (Testimony of John Zurcher) at p. 2-6.

<sup>4</sup> PG&E Testimony in I.11-02-016 at p. 3-32 (David Harrison).

reconditioned A.O. Smith pipe. Therefore, PG&E should use an assumed SMYS value of 24,000 psi for any segments where PG&E does not know the pipe specification or the specification is not listed in Appendix B to Part 192. As discussed below, PG&E has now apparently admitted that there are additional segments not manufactured pursuant to the specifications identified in Appendix B of Part 192. The federal regulations require PG&E to use a SMYS value of 24,000 psi for these segments.

PG&E's arguments in its opening brief fail to show that it is reasonable for PG&E to use assumed SMYS values greater than 24,000 psi for pipe of unknown specification and pipe manufactured to specifications other than those identified in Appendix B of Part 192.

### **1. The Grandfather Clause Does Not Relieve PG&E Of Its Obligation to Operate Its Pipeline Safely.**

PG&E argues that 49 C.F.R. § 192.107(b)(2) does not apply to pipelines operated pursuant to 49 C.F.R. § 192.619(c) (commonly referred to as the grandfather clause).<sup>5</sup> Nothing could be further from the truth. Section 192.107(b)(2) states that where an operator has pipe of unknown specification or pipe manufactured to specifications not permitted under the code, the operator must use a SMYS value of 24,000 psi. Although the grandfather provision “allows for pipelines to be operated at historic high pressures experienced between 1965-1970, that section explicitly stated that ‘an operator must still comply with § 192.611.’”<sup>6</sup> Section 192.611 states that when there is a change in class location, the operator must confirm or revise the pipeline's MAOP.<sup>7</sup> To confirm or revise the MAOP, the operator must review pressure test records (if they exist) and calculate the hoop stress caused by the proposed MAOP. Because hoop stress is a percentage of SMYS, an operator cannot properly calculate hoop stress without first knowing the appropriate SMYS value.

The record is clear that even for pipe segments operating under the grandfather clause “when a class location change occurs, that portion of the pipeline within the new class location must meet the

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<sup>5</sup> PG&E Opening Brief at p. 3 (“First, 49 C.F.R. § 192.107(b)(2) does not apply retroactively to pipe installed before November 1970 for which the MAOP was set under the grandfather clause of 49 C.F.R. § 192.619(c).”)

<sup>6</sup> Exhibit CCSF-1 (Testimony of John Gawronski) at p. 5.

<sup>7</sup> 49 C.F.R. § 192.611(a).

requirement of a new pipeline.”<sup>8</sup> The requirements for new pipeline include determining the proper SMYS when an operator has pipe of unknown pipe specifications. This requirement is contained in section 192.107(b). Thus, for pipeline segments that are of unknown specification or made to specifications not identified in Appendix B to Part 192, when there is a change in class location, the operator must either perform a tensile test to derive the appropriate SMYS, or use a SMYS value of 24,000 psi.

In addition, as demonstrated in San Francisco’s opening brief, under industry standards and the Commission’s General Order 112, PG&E has been required to use a SMYS value of 24,000 psi since 1955. Thus, PG&E’s arguments regarding pipeline safety requirements before and after 1970 have no merit, and the Commission should not countenance any arguments that PG&E has appropriately used assumed SMYS values greater than 24,000 psi.

## **2. The Record Is Not Clear That Most of PG&E’s Pipelines Were Made To API 5L Specifications.**

PG&E asserts that it procured most of its pipe pursuant to API 5L specification.<sup>9</sup> For this proposition, PG&E cites its re-direct examination of witness Zurcher. In the pages of the transcript cited, however, there is no evidence presented of PG&E’s historical procurement practices, or any evidence that would support this statement. The pages cited consist of PG&E’s witness identifying the various specification standards in Appendix B to Part 192. Indeed, even PG&E’s witness asserted that the API 5L specification “came in around the same time as the ASME standard, which was around 1955-ish.”<sup>10</sup> PG&E has also publicly stated that more than two-thirds of its pipelines were installed prior to 1970.<sup>11</sup> Given the effective date of the API 5L standard, it is impossible for any of PG&E’s pre-1955 pipeline to satisfy the API 5L standard. Further, in light of the vintage of PG&E’s pipeline

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<sup>8</sup> Attachment 1 to CCSF-1 (Evaluation of Pipeline Design Factors, Michalopoulos and Babka, Hartford Steam Boiler Inspection and Insurance Company, prepared for Gas Research Institute, (February 2000), at p. 22.

<sup>9</sup> PG&E Opening Brief at p. 3.

<sup>10</sup> Tr. Vol. 1 at p. 68:1-3.

<sup>11</sup> PG&E Testimony in R. 11-02-019 at p. 10-9:1-5 (James Howe).

system, and is also unlikely that most of PG&E's pipe was manufactured pursuant to the API 5L standard.

**3. PG&E's Reliance on Common Industry Practice Is Unsupported and Irrelevant.**

PG&E also asserts that "where an operator lacks specific documentation establishing the SMYS for a section of pipe, it is common industry practice to infer a conservative SMYS value based on reasonable, conservative assumptions about specifications under which the pipe in question was produced." As discussed above, there are serious questions as to whether PG&E can make conservative assumptions based on its operations and maintenance practices and the state of its records. In addition, PG&E has not provided any evidence regarding the relevance of industry practice to the violations alleged, or that other operators are situated similarly to PG&E. For example, there is no showing that other operators have failed to perform class location surveys for decades, failed to confirm or revise the MAOP of their pipelines, or that other operators only track the installation date of the pipeline segments or have similar or equivalent record keeping struggles. As noted in San Francisco's opening brief, even if PG&E could prove that other operators have similarly violated the law, that does not excuse PG&E's own compliance with these safety requirements.

**4. Segments with Joint Factors Of 0.80 Must Use A SMYS Value Of 24,000 psi.**

CPSD states in its brief that on September 27, 2012 PG&E submitted a letter to CPSD stating that it needed to reduce the pressure on Line 111A after determining that section 192.113 "requires a long seam factor of 0.8 for A.O. Smith steel pipe."<sup>12</sup> As described below, this is further proof that PG&E has not justified its use of SMYS values above 24,000 psi.

Section 192.113 specifies certain joint factors to be used based on the type of pipe, i.e., pipe specification and pipe class. For example, "API 5L pipe" is one specification and "furnace butt

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<sup>12</sup> CPSD Opening Brief at p. 15. Although CPSD states that it is attaching the September 27, 2012 letter, it appears that it actually attached a November 8, 2012 cover letter with PG&E's 2012 Class Location Study.

welded pipe” is a type of pipe class. Under section 192.113 a piece of API 5L furnace butt welded pipe would have a longitudinal joint factor of 0.60.<sup>13</sup> For pipe manufactured to specifications not listed in section 192.113, an operator must use the joint factor for “other pipe.” The joint factor for “other pipe” is 0.80.<sup>14</sup> There are no other pipe specification and pipe types with a joint factor of 0.80. Here, while PG&E does not explain this, PG&E appears to concede that the A.O. Smith pipe segment in question was not manufactured pursuant to any of the specifications listed in section 192.113,<sup>15</sup> and thus requires a joint factor of 0.80.

The specifications listed in 192.113 are the same specifications for steel pipe listed in Appendix B of Part 192. As discussed earlier, section 192.107(b) requires that for pipe segments not manufactured pursuant to the specifications listed in Appendix B of Part 192, or for pipe of unknown specification, the operator must also either tensile test the segment, or use an assumed SMYS value of 24,000 psi.<sup>16</sup> Section 192.107(b) is written in the disjunctive. Therefore, the 24,000 SMYS value applies if either: (1) the pipe is made pursuant to specifications not listed in Appendix B, or (2) if the pipe is of unknown specifications.

Based on these requirements, and in the interest of safety, the Commission should require that for any segment where PG&E is using a joint factor of 0.80, PG&E must also either tensile test the segment, or use a SMYS value of 24,000 psi because the segment “is manufactured in accordance with a specification not listed in Section I of appendix B.”<sup>17</sup> San Francisco notes that there are most likely many more segments for which PG&E should not use SMYS values greater than 24,000 psi, and that this should include all segments made of PG&E Spec pipe. Each instance in which PG&E uses a joint factor of 0.80 but a SMYS greater than 24,000 psi constitutes an additional violation.

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<sup>13</sup> 49 C.F.R. § 192.113.

<sup>14</sup> *Id.*

<sup>15</sup> On cross-examination, PG&E witness Harrison confessed that PG&E was having “some controversy” over how to properly characterize PG&E Spec pipe purchased from A.O. Smith. Joint Evidentiary Hearing I. 11-02-016 & I.12-01-007, Tr. Vol. 4 at p. 587:1-28.

<sup>16</sup> 49 C.F.R. § 192.107(b)(1)(2).

<sup>17</sup> 49 C.F.R. § 192.107(b).

**B. The Harmless Error Doctrine Has No Place In Public Safety.**

PG&E argues that whether it used an assumed SMYS value of 35,000 psi or 24,000 psi for segment 106 of Line 7208-01 “is irrelevant.”<sup>18</sup> According to PG&E, using an assumed SMYS of 35,000 psi, the MAOP based on design pressure for a class 3 segment is 1,213 psi. CPSD, on the other hand, alleges that PG&E is required to use an assumed SMYS of 24,000 psi, which would lower the MAOP based on design pressure for a class 3 segment to 832 psi. PG&E claims that the actual MAOP of this segment is 400 psi. Therefore, PG&E asserts because both calculated values are far above the actual MAOP of the segment, “CPSD’s report itself shows that it is irrelevant.”<sup>19</sup>

PG&E’s argument is essentially that any error caused by using 35,000 psi instead of 24,000 psi is harmless because it would not change the actual MAOP of the pipeline. This misses the point. PG&E has an obligation to correctly and safely calculate the design pressure of all pipelines. Ignorance of the proper MAOP never constitutes safe and reliable service, even where the error may not have resulted in PG&E exceeding the MAOP. Each instance where PG&E operated its pipelines in ignorance of the proper design pressure constitutes a violation of its obligation to provide safe and reliable service.

Similarly, PG&E also states that “[a]lthough we do not minimize the importance of 100% accuracy in class location, or argue that any particular error rate is acceptable, approximately 98% of class location designations were either correct or erred on the conservative side (having a higher class than necessary).”<sup>20</sup> Omitted from this statement is the fact that PG&E was unaware of many of the inaccuracies until ordered to confirm its class location designations by the Commission following the pipeline explosion on September 9, 2010 and that many of the alleged violations occurred decades ago.<sup>21</sup> The fact that the class location decreased for a segment does not excuse PG&E’s ignorance and failure to ensure that its class locations were up-to-date.

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<sup>18</sup> PG&E Opening Brief at p. 2, fn. 8.

<sup>19</sup> *Id.*

<sup>20</sup> PG&E Opening Brief at p. 2, fn. 6.

<sup>21</sup> See Appendices to CPSD-1.

**C. The Public Demands Strong Enforcement.**

The importance of maintaining operating pressures commensurate with the population density has been obvious for many years. As made clear by the record, it was first recognized as early as the 1950's when the ASA committee realized "that there was a need to consider intermediate levels of pipeline stress levels (or wall thicknesses) based on population density and other special conditions."<sup>22</sup> Based on this concern, in 1955 the ASA introduced the class location categorization system that is still used today.<sup>23</sup>

The Commission's findings must take into account the fact that PG&E knew of its obligation to perform these safety measures but failed to ensure that they were performed. PG&E admits that many of these violations "occurred many years ago."<sup>24</sup> There is also no dispute that PG&E's "procedures had not been followed by all local offices, and, as a result, some segments of transmission pipeline may not have been patrolled."<sup>25</sup>

The Commission should take no solace in the fact that PG&E had procedures in place. If PG&E did not require its employees to follow the procedures, then whether or not PG&E had procedures in place has no bearing on the question of whether PG&E performed all required safety actions. The fact that PG&E had procedures in place, but did not follow them also raises the question of whether PG&E has improperly received in rates moneys for programs that were not implemented or performed. Not only must the Commission impose a penalty sufficient to deter future similar conduct, the Commission must ensure that its regulation of utilities moves away from a "check the box" mentality of safety enforcement that enabled these violations.

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<sup>22</sup> Attachment 1 to CCSF-1 at p. 20.

<sup>23</sup> *Id.*

<sup>24</sup> PG&E January 17, 2011 Response to Order Instituting Investigation at p. 2.

<sup>25</sup> PG&E April 2, 2012 Update to Response to Order Instituting Investigation at p. 7.



**III. CONCLUSION**

The Commission must find that PG&E has failed to meet its obligations to provide safe and reliable service under the applicable state and federal law and industry standards, as demonstrated in the record of this proceeding.

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Respectfully submitted,

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